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ORIGINAL ARTICLES.

HYSTERIA IN CHILDHOOD AND YOUTH.

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THE tendency during late years has been to make the diagnosis of hysteria much less rashly than of old. The time was, and quite recently, when a large number of puzzling functional affections were called hysteria, and treated as such. Increasing knowledge of the disorder is correcting this unfortunate mistake. True hysteria frequently occurs among children, in whom it is sometimes seen in a very graphic form, in boys as well as in girls, although twice as frequently in the latter. It increases steadily in frequency of occurrence from the third to the thirteenth year, and no age is exempt. The popular idea of this affection is that it is a mere feigning of disease, though hysteria, while simulating many disorders, is never a true imitation of any. It is a psychosis with clearly defined stigmata physical and psychic. Hysteria may be described, then, as a functional disturbance of the nervous system due to no known structural lesion, manifested by paralyses, convulsions, psychic, and sensory disturbances, and impairment of vision. The early recognition of all the neuroses of childhood is peculiarly important. This is epecially true of hysteria, which, if unchecked, seriously modifies character growth and psychic development, as well as obscuring the sequelæ of acute diseases.

In almost no other disorder do we see the influence of remote causes so admirably illustrated as in the hysteria of children. A neurotic ancestry of howsoever wide a variety may be manifested in the child in this form. It is rare, if not impossible, for children to be thus affected unless there is a clear history of neuropathic ancestry, along with debilitating conditions or emotional strain. It readily happens, too, that a powerful example may produce a hysteric outbreak in a well-balanced child. The influence of environment is a most potent factor in the production of hysteria. Exciting causes are: exhausting conditions, depressed health from acute diseases, injuries, abusive treatment at the hands of others, overwrought emotionality, and objectionable education generally, especially in religious matters. A very important study for the general practitioner is to search closely into the hereditary and other causes of all the neuroses in children, and it is also a very essential part of his duty. Whenever there is recognized ancestral alcoholism, insanity, or "marked peculiarities," the children must be doubly watched and guarded.

Hysteric symptoms are frequently seen during convalescence from infectious and other acute diseases. Imitative paralysis, contracture, tremor, and persistent local pain or tenderness are likely to follow various injuries, even very trifling ones. Vexations, disappointments, fright, shame, and, above all, religious excitement, are often potent factors in the production of psychic disturbances. An early encouragement of religious thoughts and training, especially of a kind which cultivates emotional exaltation, is powerful for harm in this direction. Perhaps the very worst influence of all, because more constantly present, is unwise, especially careless, home influences, lacking in systematic and watchful control, encouraging selfishness and minor deceptions deemed necessary by the child to secure what is coveted. Lax regulations as to duty and the higher moral faculties is the atmosphere most congenial to the growth of hysteria and even worse things. However, it must not be inferred that hysteria is solely the outcome of individual blameworthiness, nor is it always the result of lax moral conditions; for, on the other hand, puritanic severity is capable of working a large measure of harm. Disorders of the generative organs, especially those resulting from masturbation, are important causative agents, about which much might be said, especially as parents are singularly unwilling or unable to control habits of the kind mentioned.

By far the most important element in hysteria is the mental phenomena, which are exceedingly varied and complex, and, to a trained observer, capable of clear differentiation, and yet, when superficially studied, appear a mere mass of mental disturbances, imitative procedures, pretense, and deception. It must first be recognized that hysteria is not a simple feature of degeneracy, but a condition which may be acquired by children of unimpeachable parentage and otherwise excellent health. The child subject to hysteria is markedly impressionable, with a great tendency to accept and act upon suggestion. There

is a dissociation of the higher mental faculties, as of volition and cerebration, from lower emotional and impulsive states. The actions of a hysteric child during the paroxysm result from morbid concepts of associations of ideas, which permit the organic activities to exhibit characteristic irregularities. The key-note to the whole situation is suggestion, both in the production of the psychosis and the emancipation of the sufferer. Morbid suggestion from without or from within, one or the other, or both, produces the malady and encourages its continuance; and wise, forceful suggestion from without will affect a cure, especially if accompanied by well-chosen auxiliary measures systematically applied.

The paroxysm of hysteria consists of certain definite steps or procedures which continue from prodromal states with regular gradations to a systematic culmination, or they may be checked here or there, producing even more extraordinary features.

The paroxysm or hysteric fit has acquired the reputation of being the most important manifestation of the disorder, because it is the most conspicuous. It may, however, be absent or only rarely observed, or, again, but atypically exhibited. The more severe hysteric paroxysm has received the misleading name of "hystero-epilepsy," and is extremely rare, and when it does occur is difficult to differentiate from an epileptic attack. Nevertheless, it is hysteria, and has nothing in common with epilepsy. A better term, as proposed by Lloyd, is "hysteria major," just as in epilepsy we distinguish between the larger and lesser epilepsy (or *grand* and *petit mal*).

The hysteric paroxysm usually begins with certain antecedent features, mostly changes in the mental state, a shifting of the mood from its normal plane. There is never absolute unconsciousness. The exciting cause may or may not be apparent; if not, the point of departure of the fit may be some auto-suggestion.

The fit follows close upon an aura, which may be either sensory or motor. It may begin abruptly, or be preceded by alternate laughing or crying. It usually begins with a subjective feeling, as of a lump rising in the throat which is accompanied by a sense of suffocation. Another form of aura consists of loud noises, throbbing or beating sounds in the ears; still another is violent headache, a boring or piercing pain, as of a nail driven into the head (clavus hystericus). At other times there is dimness of vision, or alarming dizziness. Again, there may be sensations connected with the ovaries or testicles. The fit proper is usually divided into periods. The first or convulsive period resembles epilepsy, but is in no sense identical with it. The patient sinks down, or falls prone upon the back, with the limbs extended and rigid, but with the fingers and toes flexed; the eyes are usually rolled slowly from right to left, or crossed; the jaws are firmly clenched; the breathing becomes slow and labored, and later hurried, the face flushed or bluish, the neck turgid; the cardiac action becomes more rapid and forcible, and consciousness is blunted, or even almost, but never entirely, lost. Sensation is much obtunded, and abolished in some portions of the body. Soon clonic movements succeed—a tremor affecting the muscles of the trunk, extremities, and face. This alternates with electric-like startings, during which the patient may fling himself furiously about, or actually out of bed. Presently this stage ends with sighs, and is followed by a short sleep.

The next stage is one of dramatic movements, not so commonly seen here as in Europe. These may appear by themselves, and explain some otherwise puzzling conditions. The most common form is a complete opisthotonos, tonic spasm of the muscles of the back, a bowing of the lumbar curve until the child rests only upon head and heels. This may alternate with, or be replaced by, a variety of quaint attitudes and movements, some of which simulate purposive acts, and others are merely automatic. The final or closing period of the convulsive attack is one of delirium. This is usually an expression of the dominating mental attitude, and likely to be reproduced in each succeeding fit. It usually expresses some condition of fear or sadness, manifested by tears and sobs, and more or less incoherent appealings or pleadings. The attack is not always complete, one period may be exaggerated and the others left out. Especially in children, certain acts may be habitually performed, or changed by suggestion until the combinations are most extraordinary.

A series of apparently purposive movements, or merely automatic acts, may originate in one individual, and be so powerfully suggestive to others that they unconsciously imitate them, and thus a widespread contagion occurs in religious communities and schools, such as gave rise to the dancing manias of the Middle Ages. Somnambulism should be mentioned as having points of contact with the hysteric state. A lethargy, also, sometimes follows the paroxysm. Catalepsy, another psychosis strongly resembling hysteria, may be observed during or after the hysteric fit. The duration of a paroxysm may be but a few minutes, and then, with intervals of rest, be succeeded by others, as many as two hundred attacks having occurred within twenty-four hours in a case recorded by Sachs; or it may last longer, as in a case observed by me, in which the attack con-

tinued the greater part of two hours. Those which occur fragmentarily, or present considerable variety in their manifestations, may continue, with almost no intermission, day in and day out, as in the epidemic which occurred in the Church Home of this city while I was on duty there.

The hysteric paroxysm, as has been said, is not the most important symptom of hysteria. The permanent markings (stigmata) of hysteria have to do with changes in sensation, motility, the activities of the viscera, the mind, and nutrition. Alterations in sensibility are nearly always present. Hyperesthesia and local tendernesses are common, as in the well-known hysterogenous zones. These zones and areas of exalted sensation, over which, if pressure be made, pain is produced, and some one or other of the more graphic motor manifestations are elicited; the most common of these are over the ovaries and spine. In boys the testicles are sometimes hypersensitive. Pressure over these zones may give rise to a convulsion, or, again, may cause them to stop. A hysteric pain caused by an old injury may act as a hysterogenous zone, especially in one of the joints, as the hip or knee.

Disturbances or alterations of sensation are characteristic of hysteria. Anesthesia, more or less complete, is nearly always present in the hysteric subject, who may often be ignorant of its presence. Sometimes this is only of one side of the body, divided with great exactness in the middle line from head to heel (hemianesthesia); and sometimes occurs in irregularly distributed areas (disseminated anesthesia); or, again, is distinctly localized in one arm or one leg (segmental anesthesia). This last may be accompanied by motor impairment (palsy) of the part. The areas of anesthesia, when pricked, do not readily bleed (ischemia). The organs of special sense are often disturbed in hemianesthesia, and always upon the affected side. Of these the most important are the eyes; there may be a concentric narrowing of the visual field, or an alteration in the color fields (amblyopia or color-scotoma). There may be deafness of one side, or impairment of smell or taste. The changes in the color field (when characteristic) are one of the most certain points for differential diagnosis.

The disturbances of motility in hysteria are either loss of function (paralysis), or perversion of function (contraction and tremor). These symptoms are very apt to appear by themselves. The paralyses of hysteria simulate those due to central nervous disease in their distribution, but not in their clinical history. They may be named in the order of frequency with which they occur in children, *viz.:* paraplegia, monoplegia, and hemiplegia. The paralysis of motion is commonly, but not always, accompanied by paralysis of sensation. The onset is usually sudden, and in form may be flaccid or spastic. The immediate cause is usually some emotional perturbation, which may be psychic or traumatic. The contractures in hysteria may be either partial or complete, a local stiffening, or a spasm. These contractures may persist for years, though not always constant, and sometimes returning upon slight excitation; they may remain in the same place, or pass from one part to another. Tremor is rare in children; loss of voice is not common, neither is increased rapidity of respiration. Hysteric vomiting, also rare in the young, is a very serious matter when it does occur, imperiling health, or even life. Its character is *sui generis*, a mere regurgitation, due to a spasm of the esophagus. The intestine is sometimes paralyzed in hysteria, producing an immense bloating, with noisy belching, which is usually concomitant with a condition of emotional excitement.

Hysteria is a psychosis, a profound disorder of functional activities, of almost universal distribution, but due to no known demonstrable lesion. By some change in mechanism, an entire half of the brain is temporarily invalided, which alone can explain the complete hemianesthesia. The possibility of transferring this anesthesia from one side to the other would show the two halves of the brain to be in sympathy, one with the other. The cortical inhibition is lessened, leaving the lower centers unchecked. Recent views upon the mobility of the neuron points the way to a clearer understanding of hysteric states, but as yet scarcely explains the accompanying phenomena. The hysteric child evidences a marked vulnerability to certain perturbing influences, is always susceptible to psychic changes and functional disturbance. The manifestations of the disease may disappear during many years and yet readily recur under the influence of slight morbid agencies or changes in condition, or emotional irritation.

The treatment of hysteria in children or in adults is always complicated by the fact that the causes which produce it have so much to do with environment. It is difficult, almost impossible, to effect a cure unless the unfavorable environment be changed. It is easy to point out how a case may be benefited or cured, but not so easy to enforce the measures with sufficient thoroughness to produce a satisfactory result. The most important point in treatment, to be always insisted upon, is a complete separation of the child from its parents or previous caretakers during a considerable period of time. The physician finds himself in a very difficult situation, and will

usually be compelled to compromise. Indeed, it may sometimes be wiser to do this, and then gradually lead up to other measures more and more efficient and complete. The first part of the treatment should consist of the systematic application of measures directed to the improvement of general health, which may not seem obviously much impaired. An essential factor in the production of a cure is a properly qualified nurse, or (in rare instances), a wise and patient member of the family who can be taught to exercise the necessary control. The next most important element in the treatment is moral training, a complete remodeling of the point of view of duties to self and others.

It is of the greatest importance for physicians to realize that drugs are of no value whatsoever in the treatment of the psychosis known as hysteria. Judicious reasoning, frank conversation of an educational kind, and vigorous suggestions, with sometimes the added pomp and circumstance of the proper place and conditions, are powerful agents for good. Thus, a steady repetition of suggestion, with judicious and thorough detail, by a nurse or attendant trained to this end, is of great efficacy. As soon as the more severe symptoms are overcome and the child restored to uniform good health, proper educational measures must be steadily pursued. Remedial measures, directed to the removal of functional disturbances, for instance, hydrotherapy, electricity, especially the static form, massage, and regulated exercises, are of direct value. Strong faradic applications help to overcome hysteric paralyses, particularly in conjunction with encouraging words. The manner assumed by the physician exerts the utmost influence for good or evil. A frank, candid exposition of the patient's need should be clearly given. The medical man should be recognized by the patient as most kindly disposed, encouraging, and yet relentlessly firm.

For the sensory disturbances, the cold douche, or alternate use of hot and cold water, or the employment of some of the more picturesque devices, such as metalotherapy, may prove beneficial. Hypnosis will control a certain proportion of phenomena, and is rather easy to produce in children who, at best, are very impressionable, but is little better than repeated, direct suggestion at the hands of a physician whom the child has learned to respect and esteem. To overcome a paroxysm or convulsion the following measure may prove efficient: ice water dashed repeatedly over the face or back, or trickled steadily upon one point, as from a small hose or watering-pot; pieces of ice rubbed here or there on the back or chest, and lastly, inhalations of ammonia or nitrite of amyl.

THE OPERATIVE TREATMENT OF PTOSIS.[1]

By FRANK VAN FLEET, M.D.,
OF NEW YORK.

PTOSIS is a condition characterized by a drooping of the upper lid. It may be unilateral or bilateral, partial or complete, congenital or acquired. The congenital variety is generally bilateral, although it may be of varying degree on either side. In one of the cases in which I operated ptosis was apparent only on one side, but when corrected the contrast made it evident that the same condition, in lesser degree, existed in the other eye.

It is supposed that congenital ptosis is due to a lack of development of the levator palpebræ superioris muscle, although it is possible that it is the result of a malposition of the muscle, or to an anomalous distribution of the nerves. It causes a most characteristic appearance on the part of the affected individual. The drooping upper lid narrows the palpebral orifice in varying degree, depending upon the amount of ptosis present. The head is thrown back, and the eyeball rotated downward so as to bring the pupil on a line with the narrowed opening between the upper and the lower lids. While the downward rotation of the eye is generally due to this cause, it may result from a faulty development, or maladjustment of the superior recti muscles, a not unusual accompaniment, and one which must receive consideration in operative procedures directed to the correction of the ptosis.

In the three cases of congenital ptosis in which I have operated this complication was not present. In this affection there is also a wrinkling of the forehead due to the efforts of the occipitofrontalis muscle to assist in the elevation of the upper lids.

Acquired ptosis may result from syphilis (or any constitutional trouble which produces paralysis of the third nerve), traumatism, or diseases of the conjunctiva. A cause I had never heard of until it was mentioned by the first patient upon whom I operated for this affection was the use of the Davy lamp in coal-mining. It may have been only a coincidence, but the patient himself was firmly convinced that it was the cause of his eye trouble, and furthermore he said that it was not an uncommon occurrence among miners in the Welsh collieries who use the Davy lamp. The case of this patient is as follows:

J. H. P., aged forty-six years, formerly a miner in South Wales, presented himself for treatment in July, 1896. He had marked ptosis in both eyes. Until his eighteenth year he had never observed anything peculiar about his eyes, but at that time noticed that his upper lids drooped. In the mine in which

[1] Presented before the New York Medico-Surgical Society, October 4, 1897, and the Section on Ophthalmology of the New York Academy of Medicine, November, 1897.

the patient was employed there were about 1000 men, and the occurrence of ptosis, he said, was not uncommon. In the bituminous mines, where the naked lamps were used, this affection did not occur. When the disease manifested itself, the only remedy was to seek other employment, or at least to stop using the Davy lamp. However, the patient continued to work until the ptosis was so nearly complete that to see straight ahead it became necessary to raise the eyelids with the fingers. Fig. 1 shows the condition some time before he was compelled to give up his work, and is an enlarged copy of a photograph taken in England many years ago. Fig. 2, a copy of a photograph taken by Dr. E. S. Thomson, formerly house surgeon at the Manhattan Eye and Ear Hospital, shows the appearance of the same patient about thirteen months after the operation.

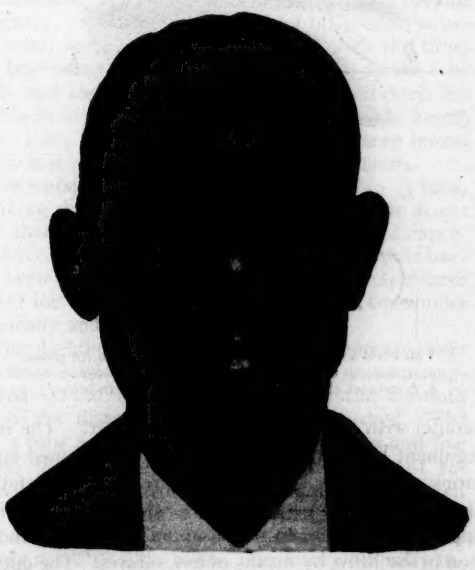
FIG. 1.

Showing appearance of patient with ptosis.

I would like to remark that the cause, as given by my patient, is not recorded as one of the known causes of ptosis so far as I have been able to ascertain, and may have been imaginary on his part.

The treatment of ptosis due to affections of the third nerve, is generally satisfactory when directed toward the cause, whether it be syphilitic or traumatic. When the result of trachoma, or any congenital condition, in which the drooping of the lid remains after the causative disease is cured, the deformity may often be remedied by simply removing an elliptic piece of skin from the upper lid and stitching the edges together. When this does not suffice, and also when the ptosis is the result of deficient muscular development, more extensive operative procedures have been unsatisfactory until recently. The levator palpebræ superioris muscle, having its origin in the orbit, is attached to the lid at about the convex margin of the tarsal cartilage, and its action draws the lid not only upward but backward as well. In the absence of this muscle, operators have endeavored to make the occipitofrontalis, the anterior portion of which is intimately adherent to the skin, take its place. The results produced by the devices of Pagenstecher, DeWecker, and others are satisfactory for the time being, but the objection has been that they are not lasting. We have, however, in the operation devised by Panas, a method which is generally satisfactory as to results, both immediate and remote. To this operation there is but one objection, *vis.*, it is complicated and difficult to understand. In fact, I know of no other operation the description of which is so confusing as this. An excellent description of this procedure may be found in De Schweinitz's work, "Diseases of the Eye," and a somewhat shorter one in Roosa's book, "Treatise on the Diseases of the Eye." There are many modifications of this operation, and I have taken the liberty of adding another. Possibly my operation is a copy of one which is already in existence, but be that as it may, I have employed it in five cases in which the immediate and remote results have been entirely satisfactory. My operation (Fig. 3), as I have taken the liberty of calling it for the time being, differs from that of Panas (Fig. 4), inasmuch as the lines of incision

FIG. 2.



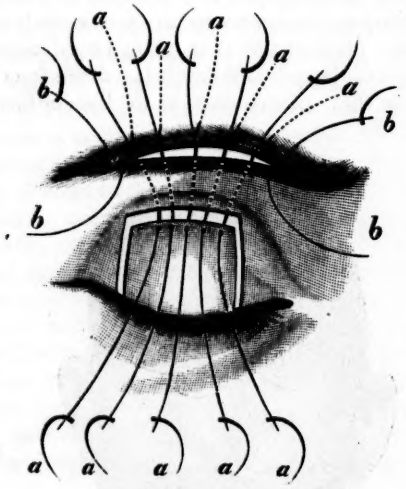
Showing the appearance of the same patient thirteen months after operation.

are straight and extend only through the integument. There is no danger of wounding deeper structures, and the flap, uniting by first intention to the upper edge of the incision in the brow, becomes a part of the skin controlled by the occipitofrontalis muscle

quite as much as it would had the incision extended down to the periosteum. A short description of this procedure is as follows:

The patient being anesthetized and the brow shaved, the face and forehead should be cleansed with a mercuric bichlorid wash. An assistant then inserts an ordinary horn shield under the lid, and with his free hand steadies the skin of the brow as directed by Panas. The operator makes an incision into the upper lid somewhat above the superior margin of the tarsal cartilage, commencing at the inner side and including the middle third of the lid. From the inner extremity of this incision another is made extending down to the ciliary border, and a third incision is made in like manner from the outer extremity of the first. The integument enclosed by these three incisions is dissected from the underlying tissues down to the ciliary border, and constitutes the flap. A final incision is made in the brow

FIG. 3.



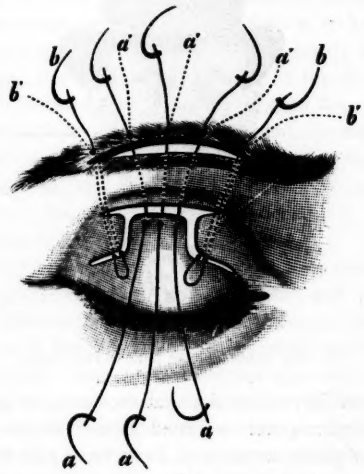
Van Fleet's modification of Panas' operation for ptosis.
a, *a*, sutures uniting flap to integument of brow.
b, *b*, sutures closing extremities of incision in brow.

parallel with the first, but slightly longer. The integument between the two is then undermined and forms the bridge. The parts are again carefully cleansed, the flap passed up under the bridge, and its upper margin stitched to the upper edge of the incision in the brow by means of five sutures. The outer and inner extremities of the final incision, *i.e.*, external and internal to the flap, are sutured, the wound dusted with iodoform, covered with bichlorid gauze, and bandaged. The latter is left in place two days, after which it is removed and daily reapplied during a week, when the stitches should be removed and the dressings discontinued. The epithelium of the flap becomes macerated and exfoliates, and the true skin unites with the under surface of the bridge, of which it becomes a part, or, perhaps disappears.

I believe it is well not to make the flap too narrow, but better, perhaps, to include even more than one-third of the lid. Its length should vary with the degree of ptosis to be overcome, always bearing in mind that it is better to have too great, rather than too little, resulting elevation of the lid, as the subsequent stretching of the skin tends to counteract the primary results.

I performed this operation upon a child, two years of age, for a physician in Brooklyn, who, after the operation, was alarmed because when the child slept the eye remained partly open. This continued a long time, perhaps six months, and the doctor feared the occurrence of keratitis, which we find following the inability to close the eye in facial palsy. In regard to such an accident the danger is nil; the patient may close the eye, and does so when occasion requires.

FIG. 4.



Panas' operation for ptosis (after de Schwienitz).
a, *a*, sutures uniting flap to integument of brow.
b, *b*, sutures advised by Panas to prevent possibility of ectropion resulting.

Another point to be remembered is that the shrinking of the bridge may cause a deformity, as shown in the left eye (Fig. 2) of the patient, to whose case I have previously referred. This has occurred in three of my five cases, and was easily remedied by freshening the edges of the wound and again stitching them together.

The two lateral sutures advised by Panas (Fig. 4, *b*, *b*,) I have not employed, but think that it may, perhaps, be well to do so in future cases; not because of the possibility of resulting ectropion, for in

this I do not believe, but because the two sutures mentioned serve to prevent stretching of the flap and consequent lessening of the good effect. Another question to be decided is whether the stitches which unite the flap to the upper margin of the incision in the brow should include the upper edge of the bridge. This latter has a tendency to curl, and if the upper edge be fixed, the tendency to cicatricial distortion will be lessened. There may be other points to be considered which will be suggested by individual operators.

NOTE.—Since writing the above I have been informed that Dr. J. Ascroft Tansley, of this city, has devised a similar operation. He has very kindly forwarded to me a reprint of an article describing his operation.[1] There is little similarity in these two operations except that they are both modifications of Panas', at least mine is, and I should imagine Dr. Tansley's to be so likewise.

EXPERIENCES WITH RETAINED INTUBATION TUBES AND ANTISTREPTOCOCCIC SERUM.

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A MOST trying case of laryngeal diphtheria in which I performed intubation nineteen times within twenty-five days first called my attention to retained tubes as a complication of this procedure. Had O'Dwyer's brilliant and helpful article upon this subject then been published two lives might have been saved. Moreover, I would not have blamed myself for failing to do an early tracheotomy in the one case, although this operation proved futile in the second. At that time I had no knowledge of the short O'Dwyer tubes with larger head and lower, broader swell, nor of the tubes with built-up heads designed for cases of this kind.

The course of the disease and the *post-mortem* demonstration of subglottic ulcers, according to O'Dwyer, contraindicates tracheotomy. He says: "If extensive subglottic ulceration exists at the time the trachea is opened, the rapid healing which follows is very likely to produce a close cicatricial stricture, if not complete occlusion of this narrow portion of the larynx. Slow healing around a properly fitting tube is much less likely to be followed by contraction, and is the only safe method in these cases." His ingenious method of local astringent application by means of a medicated gelatinized intubation-tube might have been as efficacious in my cases as in his.

[1] *American Medical and Surgical Bulletin*, February 8, 1896.

CASE I.—James L., Italian, 2½ years old. I saw him for the first time on December 17, 1896, and the following history was elicited: Previous health good; father syphilitic, as learned from the family physician; child robust and well-developed; had been ill one day; primary laryngeal involvement; severe stenosis; temperature, 101° F.; pulse strong and full. At 5 A.M. I injected 5 c.c. of No. 6 antitoxin. At 11 A.M., No. 1 tube was inserted; it was expelled, after three-hours' retention, at 2 P.M., and we thought it to be too small. At 4 P.M., reintubated with No. 2 O'Dwyer tube; culture showed the presence of Löffler bacillus and staphylococcus pyogenes.

December 18th: Injected 5 c.c. of No. 6 antitoxin and 5 c.c. of antistreptococcic serum. After every antitoxin injection the temperature rose 2½° F., dropping the same number of degrees within eighteen hours. At 4 P.M. the tube was coughed up, with membrane, having remained in place twenty-four hours; 5 P.M., reintubated.

December 19th: At 9 A.M., seventeen hours later, tube expelled; 9.30 A.M., reintubated; 8.30 P.M., 11½ hours later, tube again coughed up; 9.30 P.M., reintubated.

December 20th: At 5.30 P.M., tube expelled, retained twenty hours; reintubated at 8 P.M.; pulse, 150; temperature, 102.8° F.; administered 5 c.c. No. 5 antitoxin.

December 21st: At 3 A.M. child suddenly became dyspneic, cyanosed, and convulsed in its effort to expel tube; some membrane appeared with the tube, the boy being strong enough to cough up the tube with, and ahead of, the membrane which doubtless had been occluding it; tube retained but 9½ hours; 4.30 A.M., replaced tube; retained eighteen hours; 10.30 P.M., tube expelled; retained 5½ hours.

December 22d: At 5 A.M., inserted a No. 3 tube, thinking that the edema had subsided to some extent and that pressure would hasten its disappearance. Five c.c. No. 4 antitoxin was given, 6500 units having been injected within six days. Later experience taught me that the antitoxin should have been more heroically and rapidly administered.

The diphtheria bacillus and staphylococcus were now associated with the streptococcus. Albumin appeared in the urine, remaining until the eleventh day of the disease, when it finally vanished. The No. 3 tube now remained *in situ* four days and five hours, then, on December 27th at 10 A.M., I removed it for cleansing, it having been worn ten days. It seemed to me about time for its permanent removal, but the boy was comfortable without it only three or four hours, respiratory difficulty increasing until twenty-one hours after its removal its reinsertion became imperative; temperature, 100.8° F.; pulse, 95; child taking nourishment well.

December 30th: At 3 P.M., or three days and five hours later, I extubated, fearing loss of resiliency and ulceration of the laryngeal walls; 6 P.M., reintubated for what seemed to be laryngeal and bronchial spasm. Whistling râles were heard over the entire chest;

temperature, 100.4° F.; pulse, 90; respirations embarrassed. A culture was taken which revealed the presence of the bacillus lanceolatus. To my mind this threatened pneumonia, for in quite a number of my cases this bacterial report had been significant.

December 31st: Temperature, 101.6° F.; pulse, 120 and irregular; physical examination revealed a bronchopneumonia.

January 1, 1897: Pallor; cyanosis; cold extremities; pulse 120, and regular; temperature, 100.8° F.

January 4th: At 3 A.M. the tube was again expelled; it had remained in place four days, 9½ hours; 4.30 A.M., tube replaced; 8.30 A.M., four hours later, it was again expelled; temperature, 99.2° F.; lungs clearing; 11 A.M., intubated; tube retained four hours, and was again coughed up; 4 P.M., reintubated; retained only three hours, and at 7 P.M. was again expelled. A No. 4 tube was now easily inserted, meeting absolutely no resistance. I was well aware of the danger of so large a tube, but apnea was threatened after each expulsion, and the father so dreaded this occurrence that he had learned to press back the tube which now rose with every expulsive effort.

January 5th: At 4.30 P.M. the boy strangled, and was so nearly asphyxiated that the father pulled out the tube. From its large size it was probably being impacted in the post-pharyngeal space. The larynx was undoubtedly so lacerated that it had become intolerant of the foreign body.

January 6th: At 12.30 A.M., ten hours later, reintubated with a No. 3 tube, although from the stretching of the parts I feared it might slip down into the trachea. A culture from the tube showed Löffler bacillus and staphylococcus; temperature, 100.4° F.; pulse, 120.

January 8th: At 12 M. the lungs appeared to be normal; temperature, 101° F.; pulse, 120; removed the tube after a retention of three days, 7½ hours; 2 P.M., replaced the tube as asphyxiation was imminent; no albumin in the urine; tracheotomy was advised, but refused by the parents.

January 9th: At 4.30 P.M., 5 c.c. of No. 4 antitoxin was injected. Up to this time 7500 units had been administered, but, as I now believe, not nearly enough, since upon this, the twenty-third day of the disease, the diphtheria bacillus still remained. The child had readily learned to drink inverted, but at each and every draught almost suffocated.

January 10th: Child playing.

January 11th: At 10.20 A.M., removed the tube to cleanse it; 10.25, gasping for breath; 10.30, dead before I could replace the tube or open the trachea.

Having gained the consent of the father, and in order to explain the cause of sudden death, we removed the larynx entire. Upon looking down past the vocal cords we could see absolute approximation of the subglottic walls, due to ulceration and loss of substance of the subglottic space. Another ulcer was seen in the right vestibule and still another on the posterior laryngeal wall. The laryngeal side of the epiglottis was about destroyed. Unfortunately the specimen was lost. Thus were the symptoms and unfortunate termination accounted for.

The futility of tracheotomy was proved in the following case:

CASE II.—Libbie M., aged two years and three months. She was a healthy, well-nourished girl, whom I had been treating for urticaria and some slight gastro-intestinal disturbance.

April 2, 1897: She had been ill thirty hours. Respiratory embarrassment was so rapidly progressive that intubation was at once performed. Before my arrival the child had received an unknown dose of antitoxin to which I added 5 c.c. of No. 6. The first culture showed staphylococcus; second culture, April 4th, showed the Löffler bacillus and the streptococcus pyogenes. Five c.c. of antitoxin and 10 c.c. of antistreptoccic serum were injected. The urine was normal; pulse, 120; temperature, 101.8° F.

April 5th: Morning temperature, 99.5° F.; pulse, 96; evening temperature, 98.2° F.; pulse, 100; respiration, 30, and unembarrassed; 11.30 P.M. Coughed up the No. 2 tube with some membrane; very cyanotic, and collapsed at 12.15 A.M., April 6th, when the tube was replaced.

Antitoxin administration doubtless caused local turgescence which, until its subsidence, was an added source of danger in the absence of a tube. Rapid membrane exfoliation obstructing the tube caused its expulsion at this most critical time. There were some peculiar erythematous patches around the site of the first injection.

April 6th: At 10 A.M. the temperature was 100.4° F.; pulse, 114; 5 c.c. of No. 4 antitoxin was injected.

April 7th: At 6.30 A.M. she coughed up the tube, which was completely filled with a semi-gelatinous, non-tenacious substance, probably dissolved membrane, for no shreds appeared later. At 7 A.M., when the tube was replaced, the child was almost asphyxiated and cold; rapid reaction; temperature, 101.8° F.; pulse, 150. At 6.30 P.M. the temperature was 103.6° F.; pulse, 150.

April 8th: 2 A.M. Giant urticaria involving entire body; face and eyelids enormously swollen; neck swollen even with angles of the jaw, so seriously affecting respiration that the tube was not fulfilling its purpose; there was doubtless pressure and edema above and below it. Dr. A. M. Thorpe, who had given me great assistance in the previous case, saw this child at my request, and reported no immediate danger. I did not see her until 11 A.M., when she was found delirious, scarlet, swollen beyond all recognition, and panting for breath; pulse and respiration too rapid to count; temperature, per rectum, 107° F. She was packed in sheets which were continually flooded with cold water, rubbed with ice, and ice applied to the head. Iced colonic flushings were likewise given. She sucked voraciously at the ice pellets placed in her mouth. Nitroglycerin, strychnin, and brandy were hypodermically administered.

Within twenty minutes the temperature was re-

duced to 101.2° F., and the pulse to 100. True, the respiration was still sighing and the body blue, but at 2 P.M. the thermometer registered 100° F., the respirations were 48, and the pulse 180, but regular. Such absolute loss of respiratory and circulatory control I hope never to see repeated. Infected antitoxin was unquestionably the cause of this trouble, for neither previous nor later doses had any such deleterious effect, profound toxemia evidently affecting the respiratory, thermogenic, and cardio-inhibitory centers. It seems clear that idiosyncrasy may be excluded.

April 9th: At 5 P.M. she coughed up the tube; great dyspnea and depression; 6 P.M., reintubated; general edema and urticaria disappearing.

April 10th: At 1 P.M., tube expelled with glairy mucus; no membrane; 3 P.M., intubated with No. 3 tube.

April 11th: 11 A.M., coughed this large tube into postnasal space, from whence it was extracted with difficulty by a neighboring physician who refused to reinsert it. The child was almost moribund when I arrived at 1 P.M. I temporarily inserted a No. 4 tube, wishing to reduce the laryngeal edema by pressure as well as by the length of the tube, in order to get above and below the edematous tissues which were interfering with respiration. When reaction was established, within two hours, tracheotomy *for the edema, not membrane*, was performed by Dr. Bayard Holmes; no membrane to be seen; some mucopurulent discharge from the tracheotomy tube. A culture made therefrom showed streptococcus, staphylococcus, and Löffler bacillus. The tracheotomy tube was clear most of the time, and the breathing comfortable.

April 12th: Sent to Cook County Hospital, where she died shortly afterward from sepsis and bronchopneumonia.

The next case may be classed with the above, but in one sense only. After what was supposed to be a final extubation and recovery there seems to have been a reinfection ten days later, necessitating another intubation.

CASE III.—Jennie B., two years old; ill three days; tonsils and larynx involved; temperature, 100.2° F.; stenosis.

January 16th: Intubation. Given 5 c.c. No. 6 and 2 c.c. No. 5 antitoxin, and 5 c.c. antistreptococcic serum.

January 18th: Extubated in order to convince myself that the period of wearing the tube could be shortened; for in a series of six of my cases it had been worn respectively two and one-half days, three days, three days and three hours, four days, five days, and six days. That it could not be effected in this instance was conclusively demonstrated, since a reintubation was performed within half an hour; culture showed diphtheria bacillus.

January 19th: 10 A.M., temperature, 100° F.; breathing more labored than at the time of the first intubation, due to a complicating bronchitis; temporary anuria, but no albumin.

January 20th: Final removal of tube.

January 22nd: Father reports that the child is well; culture; Löffler bacillus.

January 24th: Culture showed Löffler bacillus, but very few and not characteristic.

January 26th: Child hoarse again and coughing.

January 27th: Bacillus lanceolatus was found, but no Löffler bacilli.

January 28th: Bronchopneumonia, and patches of membrane on the tonsils.

January 29th: Streptococcus and staphylococcus; severe stenosis requiring intubation; gave 5 c.c. No. 6 antitoxin.

February 1st: Sent to isolation hospital of Dr. F. W. Gillespie, to whom I am indebted for the subsequent detailed report.

Löffler bacillus again found, and 1500 units of antitoxin was injected. On February 2d, when the tube was removed, having been worn five days, pulse, temperature, and respiration were normal. The child was discharged on February 11th, having made an uninterrupted recovery.

Antistreptococcic serum was tentatively used in the previous and following cases, but because of the small dosage and the character of the infection, *vis.*, a mixed one, no conclusion can be adduced, nor would an expression of opinion be in order after so few observations. Nevertheless, the citation of a few cases in this connection will not lack interest:

CASE IV.—Mary S.; thirty years old; no history of previous throat trouble; a strong, robust individual; ill twenty-four hours before coming under observation.

January 8, 1897: Pulse, 100; temperature, 101.8° F.; tonsils, soft palate, and uvula swollen, almost occluding interpalatal space, a typical picture of peritonsillar abscess. There were gray adherent patches on the tonsils; severe adenitis. A culture demonstrated the presence of the streptococcus and staphylococcus. Gave 10 c.c. antistreptococcic serum; urine negative before and after the injection; the temperature fell 2° F. within twenty-four hours. She was also given a bichlorid of mercury and iron mixture, and a gargle consisting of a twenty-per-cent. peroxid-of-hydrogen solution. Twenty-four hours after the injection there was the most remarkable subsidence of the local edema, redness, and some disappearance of the membrane. Within twenty-four hours, however, the swelling again appeared and there was so much distress that I lanced the tonsil, but did not find a clean staphylococcic abscess. There was much burrowing and many very small pockets of pus which no knife could reach. This condition was unquestionably of streptococcic origin. Another dose of 10 c.c. of antistreptococcic serum was injected. Results were as rapid and satisfactory as with the previous injection; cervical glandular enlargement also disappeared. Had I used a larger primary and secondary dose I believe lancing would have been obviated. I gave a third and final injection on the fifth day of the disease, when again some turgescence

had taken place. Within one week the patient was discharged cured, a very rapid recovery from what would have become a large peritonsillar abscess, ordinarily running a course of from two to three weeks.

The following is a case of scarlatina in which antistreptococcic serum was employed. The first throat culture showed the presence of the staphylococcus, the second, both staphylococcus and streptococcus.

CASE V.—Morris McK., six years old, excessively emaciated and asthenic; ill thirteen days with what had been called diphtheria. The tonsils, palate, and uvula were still covered with gray, adherent, foul smelling membrane. An adenitis was present; no albuminuria. The hands and feet were desquamating. Erythematous patches were located upon different parts of the trunk.

March 30, 1897: Twenty c.c. of antistreptococcic serum was injected. Temperature, 103.4° F.; pulse, 158; some bronchitis.

April 1st: Pulse, 156; temperature, 103.8° F. Only slight rise of temperature after the injection. Some inflammatory reaction and erythema at the point of injection which subsided within three days following the use of an ice bag, and a little later, application of ichthyol ointment.

April 2d: Patches exfoliating; adenitis decreasing; temperature, 101.2° F.; pulse, 120; bronchitis.

April 3d: Temperature, 102.6° F.; pulse, 120; bronchitis improving.

April 4th: Temperature, 101.8° F.; pulse, 120; injected 10 c.c. antistreptococcic serum; urine negative.

April 5th: Temperature, 98.2° F.; pulse, 100; patches disappearing; rapid desquamation. Tonics were administered, and the child now regained strength and flesh, and made what the parents called a marvelous recovery.

The following is a brief history of a coincident scarlatina and diphtheritic infection. The sudden typical onset of fever and rash was evidenced, but overlooking this the attending physician called the case one of diphtheria; I pronounced it scarlet fever. The report from the culture was Löffler bacillus and staphylococcus. Thus, we were both right and both wrong:

CASE VI.—Bessie S., eleven months old; tonsils, nares, and larynx involved; ill four days previous to observation. Culture showed staphylococcus and diphtheria bacillus. Gave 5 c.c. No. 6 antitoxin, and two doses of 20 c.c. antistreptococcic serum on alternate days. The attending physician reported a very rapid recovery from both diseases without complications. To prevent the latter might be a sufficient reason for the use of antistreptococcic serum in scarlet fever.

The difficulty of differentiating a simple streptococcic, scarlatinal, not necessarily streptococcic or diphtheritic throat, except by taking both clinical and cultural findings into consideration, is thus illustrated. In my first series of 100 cases of true diphtheria I was inclined to believe that the density and color of the membrane, excessive turgescence of the parts, even in the absence of membrane and low temperature, were characteristics of diphtheria. On the other hand, I have seen many cases with these peculiar attributes in which only staphylococci and streptococci could be demonstrated. Again, the infective agent of scarlatina has been supposed to be a variety of streptococcus, and many clinicians have asserted that the tonsils are its point of entrance into the body. In an article on "Scarlatina and the Streptococcus Infection," written in 1895, I suggested other infective atria, such as the gastro-intestinal tract and skin. It is a curious fact that all throat cultures taken by me in cases of scarlatina during the past six months, and in five recent cases of scarlatina, show no other germ than the staphylococcus; whereas, I had expected in each and all of these cases to find the streptococcus. Much yet remains to be learned in regard to the genesis of throat lesions and their associated complications.

CLINICAL MEMORANDA.

A CASE OF HODGKIN'S DISEASE ASSOCIATED WITH MULTIPLE NEURITIS.

BY R. ABRAHAMS, M.D.,
OF NEW YORK;
DISTRICT PHYSICIAN TO MOUNT SINAI HOSPITAL.

M. L., Russian, male, single, aged thirty-five years. Family history unknown. During childhood he had smallpox as well as all the diseases peculiar to this period. His boyhood and youth were spent in idleness, both of mind and body. At the age of twenty, probably sooner, he began to masturbate. This habit continued until he was thirty years of age. About this time his fancy turned to thoughts of matrimony, but he soon relinquished the idea, as "by trial" he found himself incapable of performing the sexual act. His genital organs, however, were well developed. His second bad habit was the excessive use of alcoholic beverages. During six years he drank heavily and promiscuously—anything that was alcoholic. At the end of this time he began to experience pain in the lower extremities. The pain was dull, and at times shooting or lancinating, but always present. Some time after slight ataxia supervened, when he sought refuge in a hospital. At this institution he received both medicinal and electric treatment nearly a year, with neither real nor apparent amelioration of his symptoms. During his stay in the hospital alcohol was absolutely withheld.

At this time a small "fleshy lump" made its appearance on the right side of the head, joining the neck. The lump slowly but steadily increased in size. A few weeks after a second tumor appeared on the same side of the head. When the second swelling attained the size of

a horse-chestnut it stopped growing, while the first continued to increase until it reached the size of a small orange.

He consulted me during March, 1897. On examination the patient was found to be of medium size, with a mild lateral curvature of the spine (Fig. 2). Otherwise

FIG. 1.

Showing appearance of patient with Hodgkin's disease.

he was well built and well nourished. The heart, lungs, liver, spleen, and kidneys seemed to be normal. He had dyspepsia of moderate degree. He stoutly denied alcoholism, but admitted masturbation; never had any venereal disease. He complained of constant shooting and burning pain in the lower extremities. The pain was aggravated by pressure. Mild ataxia was present; total absence of patelar reflex on both sides; staggering on walking with closed eyes; feeling as if walking on sand, and, *upon suggestion*, he owned to the girdle sensation. It must be mentioned that the Argyll-Robertson pupil was absent; the sphincters were normal, and electric tests yielded negative results. The clinical picture, therefore, was suggestive of locomotor ataxia.

The man had scarcely been two weeks under observation when new features developed. The glands of the neck showed an appreciable increase in size. At the same time two glandular enlargements became visibly apparent at the upper borders of the parotid glands. In the course of two weeks more the axillary and mammary glands gave optical evidence of abnormal growth. A glandular, movable mass appeared over the sternal notch. It was also noticed that while these glands were increasing in size the abdomen also was growing larger, although repeated and careful examination did not reveal any alteration in the size of the internal organs. The rapidity with which the glands enlarged was very remarkable. Within six weeks the cervical glands presented one continuous mass, hanging down like a double chin; the mammary glands attained the size of large oranges. The two old enlargements on the back of the head shared in the general hypertrophy, so that they became double the original size. The accompanying figures fairly illustrate the condition.

The only subcutaneous lymphatic glands which escaped enlargement were the epitrochlear and inguinal. The constitutional disturbances accompanying the glandular phenomena were slow but progressive anemia and loss of appetite and muscular strength. At this stage, with a clinical diagnosis of leucocythemia, the blood was examined. Dr. F. S. Mandelbaum, Pathologist to Mt. Sinai Hospital, to whom I am indebted for the examination, reported May 19th as follows: "Your patient's blood shows 2,900,000 red and 4500 colorless corpuscles per c. m. The ratio, therefore, is 1 to 644, which comes within the normal limit. The percentage of hemoglobin is 60 per cent. (Fleischl.) The dried and stained preparations showed that the majority of white corpuscles were of the

FIG. 2.

Back view of same patient, showing to some extent the glandular enlargement.

ordinary neutrophile, polynuclear type. A few mononuclear forms were seen, but no lymphocytes or eosinophile cells were present. There was a moderate degree of poikilocytosis, but no nucleated red corpuscles were found."

About the first of June the patient began to complain of marked weakness in his forearms and legs. This terminated, within a day or two, in complete motor-paralysis of the extensor muscles of the forearms and legs. Sensation was undisturbed, and there was pain on pressure along the nerves. Within a few days the muscles grew flabby, showing a tendency to rapid degeneration. At the same time a mild delirium tremens developed, accompanied by a reluctant confession to a history of prolonged and profound alcoholism. The delirium was quite active during the night. During the day the patient's intellect was comparatively clear, although he never ceased picking snakes around his bed and bedding. Slight jaundice and bronchitis, difficult breathing, and loss of control over the bladder developed. Intestinal hemorrhages were frequent and marked after the patient took to bed. On the 10th of June he died of acute edema of the lungs; no autopsy.

The treatment was carried out with system and regularity. It consisted of the internal administration of strychnin, $\frac{1}{60}$-grain doses, gradually increasing to $\frac{1}{10}$-grain three times daily, and also increasing doses of the arseniate of soda. Alcohol was absolutely forbidden. Nourishing food and every obtainable comfort were secured for him, but all were of no avail.

Besides the interesting combination of multiple neuritis and Hodgkin's disease presented by this patient, the case emphasizes a valuable lesson in diagnosis. Strümpel and others regard the differential diagnosis between chronic alcoholic-neuritis and tabes dorsalis as not only important but quite difficult. The resemblance of this case to one of locomotor ataxia was only intensified by the absolute denial of a history of alcoholism, which was steadfastly maintained almost to the end. Other interesting features of the case are the utter failure of treatment and the rapid and fatal termination, justifying, indeed, the name given to Hodgkin's disease, namely, malignant lymphoma.

A CASE OF PURPURA RHEUMATICA.[1]

BY WALLACE JOHNSON, M.D.,
OF WASHINGTON, D. C.

W. L., male, aged twelve years. The patient was anemic, not well developed, and complained of pain in the back and abdomen, and also in the left elbow and right knee. The joints were found to be slightly swollen, red, and painful on motion. The thermometer indicated a slight rise of temperature. The patient's mother stated that during the few days preceding the examination he had had pain in various joints and also abdominal pain, particularly at night. At night, when the pain was most severe, vomiting occurred. Sodium salicylate in 10-grain doses was ordered to be given every three hours.

The next day, October 1st, the location of the pain had changed from the joints previously affected to the opposite elbow and left ankle. The severe abdominal pain at night continued; temperature, 101° F.

October 6th: During the first few days of this month the location of the pain frequently changed from one joint to another, and at present has entirely disappeared. The abdominal pain previously referred to persisted, though only at night, and was still accompanied by vomiting. There was no rise of temperature after October 2d; the bowels acted daily. During the morning there was present a slight tenderness over the upper abdomen, which by evening disappeared. Owing to the regularly recurring attacks of colic, the blood was examined for malarial parasites, but none were found.

October 8th: A dose of calomel emptied the bowels of a large quantity of feces, which was examined for the presence of any intestinal parasite that might be the cause of the colic. A few eggs of the tricocephalus dispar were found; but as all authorities agree that this parasite has no clinical significance, its presence was not considered a causative factor of the colic.

October 9th: Patient felt well and did not have colic the previous night.

October 12th: Three days before, after unusual exertion, the patient's feet swelled, became painful, and that night another attack of vomiting and colic occurred. At the time the mother noticed an eruption, "like that of scarlet fever," over his hips, ankle, and knee-joints. This eruption soon faded, and left only a few purpuric spots over the joints mentioned; colic and vomiting persisted at night.

October 27th: The joint-pain was entirely overshadowed by the severity of the colic and vomiting; temperature normal.

October 28th: After the administration of calomel and castor-oil the patient had a large movement of the bowels in which some blood was observed; no colic on the preceding night.

November 1st: No colic since October 27th; profuse purpuric eruption was present over both legs and extended as high as the waist; a few spots over wrists and elbows; none on the upper part of the trunk.

November 8th: The pain did not recur until the night of November 6th; it lasted a few hours and was not accompanied by vomiting. The next day the ankles were swollen and painful, but this condition disappeared within twenty-four hours.

November 10th: Slight abdominal pain on the preceding night; a few new purpuric spots had appeared.

November 15th: A new outbreak of purpura was present over both legs. A careful examination of the heart by Dr. J. D. Thomas did not reveal the presence of any abnormality. During the last two attacks of colic a rise of temperature did not occur.

The course of the disease was characterized by an apparent division into three successive periods, separated by intervals of eight to ten days of comparative health. Each exacerbation was marked by attacks of colic accompanied or preceded by rheumatic pains in the joints and followed by a purpuric eruption. The three prominent symptoms apparently had some relation one to the other, and were evidently not affected by treatment. During the first attack the relief of the colic was coincident with active purgation; in the second, relief preceded purgation; and in the third, a carthartic was not given. Under

[1] A disease resembling a form of purpura observed by Henoch of Berlin, and sometimes called Henoch's disease.

these circumstances it seems likely that the end of an attack and the action of the calomel were but coincident, not interdependent. After the first each subsequent attack was seemingly due to over-exertion.

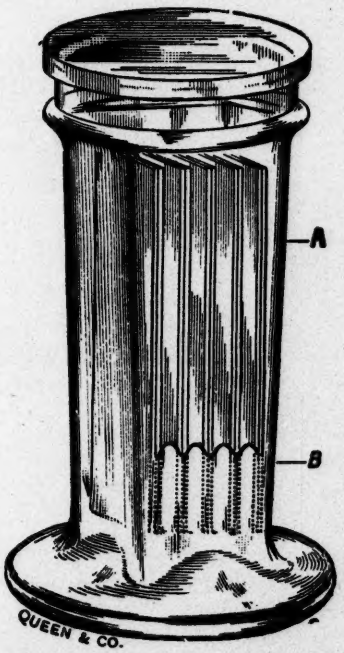
NEW INSTRUMENT.

A NEW LABORATORY DISH.

By W. L. COPLIN, M.D.,
OF PHILADELPHIA;
PROFESSOR OF PATHOLOGY AND BACTERIOLOGY IN THE JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

In the laboratory of the Jefferson Medical College we almost exclusively use for routine work the paraffin method of embedding. The blocks of tissue are infiltrated in the usual manner, and the sections cut with the Ryder, or Minot microtome. The student cuts his sections and fastens them on the slide by means of Ohlmacher's com-

FIG. 1.

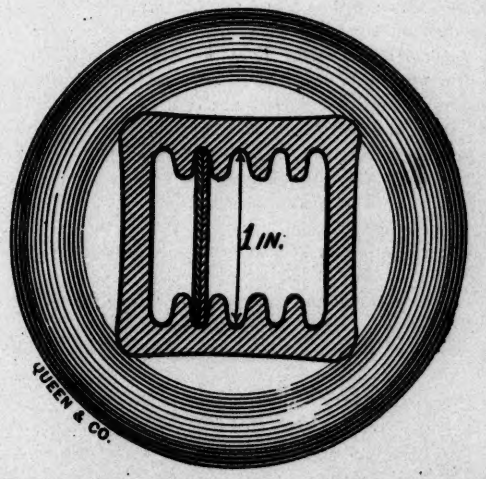


This cut is about two-thirds of the exact size of the dish. At *A* can be seen ten slides, placed back to back, and passing down between the ribs at *B*. Since this figure was drawn the width of the base has been increased, so that the base is now the width indicated in Fig. 2.

bined water-albumen method, in combination with certain improvements of the methods of Gaule and Mayer. These are then kept from twelve to twenty-four hours in the drying-oven at a temperature of 37° C., until all the water is evaporated, the paraffin and section having, during the evaporation of the water, straightened out perfectly. The slide is now gently warmed until the paraffin, which has a melting-point of 45° C., begins to melt when it is thrust into kerosene, which in ten minutes completes the removal of the paraffin. The excess of kerosene is wiped off, the slide washed with a few drops of alcohol and then placed in a dish of alcohol; from this dish of alcohol the staining is conducted as usual. If the tissue has been hardened in corrosive sublimate, it is necessary to carry the cemented section through diluted tincture of iodin to remove the mercuric salt; this is followed by washing in alcohol when the section is ready for staining. The stains are conveniently kept in large salt-mouthed bottles into which the slides are placed for staining, mordanting, dehydrating and clearing.

It is usual for the student to take from five to ten slides through the various solutions at one time, and in so doing he not uncommonly scratches the section off one slide by rubbing it against another. This difficulty arises no matter whether the method of Gaule, Suchannek's modification of Gaule's method, Gulland's modification of Gaule's method, or what is better, Heidenhain's water method be used. Even employing any of the collodion methods does not permit us to escape this danger. In order to overcome this, the writer sought very carefully through the dishes which have been designed by various workers, but failed to find anything which was ideally available. True, Ranvier has designed a rack upon which a number of slides may be supported, but this is entirely too

FIG. 2.



This represents a transverse section of the dish at the point marked *B* in Fig. 1, viewed from above and showing the ribs and intervening grooves. The two arrows mark the position occupied by a slide one inch in width. Just to the left of the arrow is shown a transverse section of two slides placed back to back, as is usually done for staining.

cumbersome for general laboratory use, and besides involves a large amount of fluid, which makes it an expensive luxury. With these points in view, I have devised a dish which is expected to overcome some of the above difficulties.

The inside measurements of the dish are 3½ inches in height, 1 inch square at the bottom, 1¾ inches square 3 inches from the bottom, and 1¾ inches in diameter at the top which is round, and closed by means of a ground, grooved, Stender cover which when in place makes the

dish air-tight. In order to render the dish stable, the base is the broadest and heaviest part, measuring nearly 2½ inches in diameter. Extending upward from the bottom on the inside and on two opposite sides, are eight ribs, four on each side, forming between them three grooves sufficiently wide to admit in each groove two slides of ordinary thickness. Two slides can also be placed in the outside groove, between the outside ribs on either side and the inside of the dish. This gives the dish for ordinary purposes convenient and not crowded accommodation for eight slides standing on end, or if the sections are small, and the slides thin, four slides may be placed outside of the ribs, two on each side, back to back, making ten in all.

An ordinary Stender dish requires about 120 cubic centimeters of fluid to immerse a slide sufficiently to cover a section cemented to its center. The above dish requires less than one-third of that amount to secure an equivalent degree of immersion. Of course, these dishes vary slightly in their capacity, as all pressed glassware will; such a variation, however, does not amount to more than from ten to fifteen cubic centimeters.

Where, for reasons of economy, or otherwise, it may be desirable to close the top of the dish by means of a cork or rubber stopper, the expense may be materially reduced. When closed by means of a glass cover, as described above, and shown in the illustration, the cover and the dish will each bear the same number cut in the glass, so that the student working at his desk, may easily avoid mixing the covers which would not only be detrimental by mixing incompatible fluids, but as each lid can be ground only to fit the dish which accompanies it, exchanged lids would not fit tightly.

In order to facilitate cleaning and to avoid inaccessible corners, all the angles are rounded.

The advantages claimed for the dish are: (1) Convenience; a number of slides can be safely handled at one time. (2) Great economy in the use of reagents; not only is the amount used less than is required with the Stender dishes, but in case, as will not uncommonly occur with students, anything happens which ruins the contained fluid the loss will be materially less. (3) No other dish of the same height and the same capacity possesses equal solidity. (4) Contained fluids are prevented from evaporating by the tight-fitting top. This is not secured in the Naples dish.

I desire to express my appreciation of the assistance rendered by Messrs. Queen & Co. in securing working drawings from which the above cuts have been made, and the final successful production of the dish.

THERAPEUTIC NOTES.

Gelatin as a Hemostatic.—CARNOT (*Ther. Wochenschr.*, September 26, 1897) finds that of all the agents used to induce coagulation of the blood none equals gelatin. Its power of coagulability was shown by experiment some years ago, and even in small doses this is evident in hemorrhage from an exposed surface, such as the nose or the skin, where the temperature is below that of the melting-point of gelatin. In the organization of a blood-clot, the influence of the contained gelatin is for good, as it has a favorable nutritive effect upon the forming granulation-tissue.

Gelatin may be used in a five-to-ten-per-cent. solution in water, or, better, in normal salt solution. This preparation should be sterilized, on two successive days, at 100° C. during fifteen minutes. In several cases in which children were brought into the hospital bleeding from the nose, of several day's duration, Carnot was able to stop the hemorrhage at once by the injection into the nasal cavities of an ounce or two of this mixture, and the insertion into the nose of a tampon soaked in the same fluid.

The fluid must not be above the body temperature when brought into contact with the bleeding surface. In hemorrhage from the stomach or intestine, the remedy is useless, as the digestive action of the stomach destroys its virtue. In metrorrhagia, it is of incalculable value, if injected into the cavity of the uterus under aseptic precautions. Similar treatment serves to stop persistent rectal bleeding.

In surgical operations in situations in which hemorrhage is not easily controlled, the application of swabs of cotton soaked in the gelatin solution will stop the bleeding almost instantly. This is especially valuable in operations on the liver, kidney, etc.

To further coagulability of the blood in general, the gelatin solution may be introduced into the rectum, or injected subcutaneously. By the latter method a hemophiliac may be saved from a long hemorrhage and a beginning purpura hemorrhagica may be cut short.

The Hypodermic Administration of Quinin in Malaria.—DUNHAM (*Vir. Med. Semi-monthly*, November 12, 1897), who has had a great deal of experience with malaria, is an advocate of its treatment by means of the subcutaneous administration of quinin. It is recognized that the segmentation of the plasmodia occurs just before or at the time of the chill. A much smaller dose of quinin than is ordinarily required, if administered at this time, will quickly control the attack. It is in the case of patients who do not well tolerate the drug, or when it is desirable to cut short an attack, that the hypodermic method is especially valuable. The hydrochlorosulphate is the best salt for injection, as it has the strength of the sulphate, and its use in the manner indicated is not painful. In many cases, a 5-grain dose of this salt injected four hours before the expected paroxysm and the same quantity injected four hours after its occurrence, will at once check the disease, and completely cure it within four or five days. In some instances larger doses will be required. In cases of the estivo-autumnal form, it is advisable to begin treatment at once and to push it relentlessly, at the same giving the patient the benefit of the best hygienic surroundings. A relapse is even then likely to occur, and the cure must not be considered perfect until several weeks have passed without a recurrence of the disease.

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

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SATURDAY, JANUARY 1, 1898.

THE DISPENSARY BILL.

THE text of the "Dispensary Bill" which it is proposed to introduce in the State Legislature this winter will be found on another page of this issue, incorporated in the final report of the Committee on Charity Abuses as presented to the Medical Society of the County of New York at its last monthly meeting. This measure is the result of mature and careful deliberation, and has the endorsement of the principal medical societies of the State through their representatives in joint committee.

The bill as presented differs materially from the one which passed the Legislature last winter but failed to receive the Governor's signature. The great improvement—for this measure is vastly better than the former—lies in the fact that too much "reform" is not attempted. It avoids the fatal mistake of the now famous Raines' law, inasmuch as impossibilities are not contemplated—no effort is made to define a "poor person," which was an organic error in the former bill.

The primary essential object that will be accomplished by the enactment of this law is the placing of the dispensary question upon the statute books, giving it, as it were, a legal status. Practical experience in its application will suggest from time to time such amendments as the exigencies of the future may necessitate. The admirable feature of the measure lies in its conservatism, which cannot fail to insure for it a united effort on the part of the profession to place it among the laws of the State.

The State Board of Charities, which is given power to grant and revoke licenses under which dispensaries are to be conducted, will be responsible for the administration of the law. It will not be necessary for the medical profession to do police duty as has been the case in the enforcement of the general medical law of the State—a law successful only through the efforts of the profession. The members of this Board will no longer be able to say "we lack power," for, possessing authority to make rules and regulations governing the conduct of dispensaries, and armed with the power to revoke licenses in aggravated cases, the members of the Board will have it in their hands to elevate the present defective dispensary system to a constructive instead of a destructive charity.

THE MEDICAL NEWS bespeaks for the bill the prompt and favorable consideration, not only of the Legislature but also of the Governor, and foresees in the wise administration of such a law prompt relief from a great social abuse.

THE FAITH-CURE AGAIN.

DURING the last two weeks two deaths have occurred, the immediate result of the nefarious practice known as the "faith cure." The child of a man in Camden, N. J., died of what we understand to have been diphtheria. Later the father and a certain "faith-cure" professor were summoned before the court on the ground that they had caused the death of the child. There is no necessity to go into the details of the hearing and the hopeless ignorance and superstition displayed, but it is gratifying to know that the jury, after being out a few minutes, returned a verdict that "the child came to her death through the criminal negligence of her father, the aforesaid professor being an accessory." Something of the same kind occurred at Baltimore, the particulars of which we do not happen to have at hand. It is mentioned in order to emphasize the pressing need of legislation against such preposterous, indeed, criminal practices.

From Pennsylvania comes the report that Christian Science has received a set-back in that State from

which it will find it most difficult, if not impossible, to recover. Through a judicial ruling recently made by Judge Pennypacker, permission for the incorporation of the creed which substitutes "metaphysical healing," as it is termed, for rational diagnosis and therapeutics, has been denied, and the practice of this ridiculously fatuous belief, if it may be called a belief, has been uncompromisingly declared as "against the law of the State."

Some of the points brought to light in this legal investigation as to the claims of the Christian Scientists appear both absurd and dangerous; absurd, because of the revelation they bring of the queer medieval mental perceptions prevalent among this sect; dangerous, on account of the immense risk to human life their application involves. Their teachings declare, for example, that "metaphysical healing" extends to such serious and fatal diseases as rheumatism, scrofula, cancer, smallpox, and consumption; in the latter disease, the *naïve* advice is given to "take up the leading points included, according to the individual's belief in the disease, show that it is not inherited, that inflammation, tubercles, hemorrhage, and decomposition are only beliefs, and these ills will disappear." Regarding luxations, they are equally hopeful, and in all seriousness "authenticated records" of the cure "through mental surgery alone of dislocated joints and spinal vertebræ" are offered for the Court's inspection. In the case of infants and children too young to understand the wonderful intricacies of the Christian Scientist's mind, the mental receptivity of the little one's elders transfers the cure through them to the child! The technic point of law upon which the ruling of the Court was based was obviously that which relates to the practice of medicine in Pennsylvania; and coming as it does so soon after the two lamentable instances of loss of life above referred to, the decision must be considered a timely piece of judicial action.

TREPHINING FOR HEMIPLEGIA AND NEWSPAPER NOTORIETY.

IN THE NEWS of last week we commented editorially on the Public Press and the Academy of Medicine anent the question of allowing reporters of the daily papers to be present at the meetings of the Academy and its Sections, and to make such report of the proceedings as they decided would startle or interest their readers. The fact that much surreptitious advertising, evading the letter of the code of ethics, while violating its spirit, is indulged in, is patent to the most unobservant. But the transgressor who thus attempts to bring his wares to the uncritical eye and gullible mind of the laity, is in nowise to be compared, in the matter of depravity, with him who gets the ear of the reporter in private and fills it with glowing statements of his own revolutionizing discoveries and brilliant achievements.

Such a flagrant example of the latter kind of advertising, not to speak of other reprehensibilities, has recently been perpetrated by a surgeon of this city, that we are constrained to call attention to it. As it involves not alone the ethical side of the question, but concerns as well, probably, a mistaken diagnosis and possibly an unwarranted procedure in the treatment of the patient, we shall content ourselves at this juncture with a recitation of the case, leaving for a future time, until the surgeon in question has had an opportunity to deny and disprove the report of statements attributed to him, a more personal consideration.

The facts of the case, so far as we have been able to learn them, are as follows: A man, fifty-six years old, was seized suddenly, without particular premonitory symptoms, save that of headache of several days' duration, with a sensation of numbness and unwieldiness of the right leg, and within a few minutes with a similar condition of the right upper extremity of the same side. The right half of the body rapidly became hemiplegic, and within a quarter of an hour the patient was comatose. He was seen immediately by a physician, who called a surgeon in consultation. The latter, on seeing him, advised that he be removed to a hospital and trepanned. And within four hours from the occurrence of the apoplexy the patient was trepanned over the left parietal region. With what object in view it seems difficult to conjecture.

Nothing abnormal was discovered, although an exploratory needle was carried into the brain in different areas, the lateral ventricle among them. A considerable quantity of cerebrospinal fluid, including that of the lateral ventricle, escaped. No blood, fluid or clotted, save that spilled in the operation, was found. The patient rallied, and after three or

four days began to recover consciousness in a way exactly parallelizing a goodly number of apoplectic patients whose lesion is a thrombosis or moderate rupture of the middle cerebral artery, even when they are not bled or given vasomotor equalizers and absolute rest, the sequelæ of the attack symptomatically being right hemoplegia and total aphasia. Then comes the startling information through the medium of the secular press that a new treatment, "Trephining for Apolexy," had been vouchsafed to afflicted humanity at the hands of a surgeon to —— Hospital. The symptoms of the patient's illness are given in detail, and then the surgeon is quoted as saying to the reporter, his remarks being in quotation marks as they are here: "I have given much thought to the subject for a long time." Alas, that such things should be! "And I had been waiting for just such a chance as this to put my theory into practice. I have proved now that ordinary apoplexy may be cured by trephining." The *naïvete* of this concluding remark, the hope that it holds out to sorrowing ones who see those immeasurably dear to them stricken with this alarming condition, is to them like the Balm of Gilead, and the genesis of the hopeful statement may have been founded on the belief that the hand which applied the balm so skilfully and efficaciously in this case might be asked to do it in another; yes, even in scores of others, until his megalomaniac claims shall be shown by sad experience to be an air bubble. But, to continue the reputed words of the surgeon, "I believe that this is the first time that trephining for an ordinary case of apoplexy has been resorted to." We concur in this belief, and we gratefully thank the surgeons, past and present, for their concurrence in establishing this most praiseworthy status. And if prayer or supplication is of avail to keep this so, we humbly offer it. That any man should be so bereft of the faculties constituting common sense or judgment as to believe for one moment that he can reach the seat of lesion without sacrificing the patient in a case whose features mirror absolutely the most typical case of cerebral apoplexy due to occlusion or rupture of the middle cerebral artery, surpasses human understanding.

"Any literature that I have read upon this subject does not refer to the treating of ordinary apoplexy in this manner, and I believe that I am a pioneer in this direction." And again we concur! No, a thousand times no. There is no literature on the subject, and so long as the rank and file of physicians are recruited from men and women endowed with sufficient gray matter to comprehend the rudiments of anatomy and physiology, and the underlying principles of pathology, so long as the geniuses of our profession do not outrage their endowments and the unknowing do not violate their trust, there never will be such a literature. He is a pioneer indeed; the pioneer who prepares the holocaust and brings grief to many. We are desirous of doing no man an injustice. We contend for the rights of the individual, and we believe in the supremacy of personal opinion. If the surgeon in this instance believed that he had to do with a supracortical hemorrhage, then operative interference was justified. But in a man fifty-six years old, whose urine was shown on examination to contain casts and albumin, who develops the symptoms of cerebral apoplexy without preceding trauma or evidences of local contagious disease, supracortical hemorrhage is so extremely rare that, in truth, careful deliberation on the part of those to whom his fate is entrusted and the counsel of those whose experience has been great along the lines of such disease is the smallest consideration that should be granted him.

We refrain from further comment on this matter for the time being, for we would gladly learn and convey to our readers that the words of the daily papers, apparently coming directly from the surgeon, were false, and that the case is one that must be ascribed to misplaced zeal or mistaken diagnosis.

ECHOES AND NEWS.

Medical Faculty of Paris.—The theses for the degree of Doctor of Medicine presented to the medical faculty of Paris during the year 1896-97 numbered 640.

A Statue to Pasteur.—A statue to the memory of Pasteur has been erected at Melun by the agriculturists and the veterinary surgeons of the Departments of Seine and Marne.

The Sale of Serum.—The authorities of Paris have discovered that, although there is a law which forbids it, certain chemists have been manufacturing and selling preparations of serum. It has not yet been ascertained whether, as in the case of tuberculin, any of these preparations are fraudulent.

A Healthy Locality.—Friendsville, a little village in the Pennsylvania mountains, is remarkable for the longevity of its inhabitants. The town contains 135 inhabitants, of whom 27 have passed the age of ninety.

Medical Men and Preliminary Imprisonment.—The Obstetrical and Gynecological Society of Paris has appointed a committee to draw up a proposition to modify the law concerning preliminary imprisonment of medical men in cases of malpractice.

X-rays in Military Surgery.—The Röntgen rays are being employed with great success in cases of gunshot wound among the British troops in India in locating splinters of lead which would otherwise escape detection, as well as fractures and splinters of bone.

Typhus Fever at Skye.—A number of cases of typhus are reported at Skye, a small hamlet near Portree, Scotland. The inhabitants did not know the nature of the disease, and consequently children from infected houses were permitted to go to school. As a result, several members of the teacher's family have been stricken with the disease.

Vaccination or Prison.—A young woman of Atlanta, Ga., was recently fined $25.75 by Recorder Calhoun of that place for refusing to be vaccinated. She was unable to pay the amount and was ordered to serve twenty-five days in the city prison. After having been locked up for three hours she decided to be vaccinated, and was subsequently released after this had been done by her family physician.

The Stringencies of New York Quarantine.—A case of smallpox was discovered on board the Steamship "Edam," which arrived in New York Harbor on December 19th from Amsterdam with 277 steerage passengers. The health officer ordered all on board vaccinated and their detention at Hoffman Island for fourteen days. The vessel was thoroughly fumigated before being permitted to proceed to her dock.

Cattle-fever Quarantine.—The Department of Agriculture has issued a circular to railroads and transportation companies notifying them in regard to a contagious and infectious disease known as splenic or Southern fever which exists in certain parts of the country, and forbidding them to transport any cattle from below a certain line to any portion of the United States, except by rail or boat for immediate slaughter, from January 15th to November 15th of each year.

The Blood of the Buzzard as a Source of Antitoxin.—Dr. Eugene Street of Fall Creek, North Carolina, writes to ask if the blood of the buzzard has ever been tested for antitoxic properties. He suggests that the buzzard seems immune to disease ptomains and toxins, and that it may be within the range of possibility that a principle of more or less antitoxic powers could be obtained from it. Here is an original field of investigation for the ambitious serum-therapeutist.

Another Bogus Dentist Fined.—In New York General Sessions a man was recently fined $500 for practising dentistry under an assumed name, that of a man who was a graduate of a Western dental college and is now dead. The officers of the New York State Dental Society are reported as declaring that in many instances men are practising dentistry under the names of dead persons who held regular diplomas, and, moreover, that there is a regular traffic in dentists' diplomas.

Approval and Disapproval in Georgia of the Marine Hospital Service.—A joint resolution was recently adopted in the Georgia Legislature providing that all quarantine matters be entrusted to the United States Marine Hospital Service, and memorializing Congress to embody this resolution in a National Quarantine Law. The Governor of the State signified his disapproval of it by refusing to append his signature, on the plea that such action was contrary to the doctrine of State rights. Comment is unnecessary.

Explosive Hair-combs.—The explosion of a quantity of celluloid hair-combs which recently occurred on an elevated-railroad train in New York City, draws attention to the dangerously inflammable nature of this substance. In referring to this subject, the *British Medical Journal* mentions the case of a young girl who, while wearing one of these celluloid combs, bent over a lighted candle, with the result that, although the comb had not touched the flame, it exploded from the heat, and the girl was badly burned about the face and eyes.

Smallpox in a Dog.—In the smallpox hospital at Atlanta, Ga., there is a small hairless Mexican terrier which is suffering from the disease. Two weeks ago the dog's master was attacked with smallpox, and was removed from his home to the hospital by the Health Department. Three days later the little dog, which had been in the habit of sleeping with his owner, developed the typical smallpox eruption, and the matter was reported to the health authorities. The dog is now at the hospital with his master, and is being well cared for.

Obituary.—The death is announced of Dr. Joseph Lewi of Albany, N. Y., on December 19th. Dr. Lewi was born in Radnitz, Austria, August 17, 1820. He received his medical education at the University of Vienna, and came to this country soon after his graduation. He was at one time President of the Albany County Medical Society, and at the time of his death was the senior member of the Board of Censors of the New York State Medical Society. For twelve years he served as a member of the State Board of Public Instruction, and refused re-election after four terms of service.

Dangerous Lay-Press Prescriptions.—The *British Medical Journal* comments upon the appearance of a dangerous prescription which recently appeared in the "Answers to Correspondents" column of an English paper called *The Hearth and Home*. The prescription is as follows: "℞ Potass. bromidi, grains 10; Liq. strych., *m.* 5; Tinct. cinch. co., ʒ ½; aq., ʒ ss. Misce. Ft. haustus, 6 ter die." The fact is pointed out that strychnin and bromid of potassium are pharmacologically antagonistic and chemically incompatible, and also that in the above

mixture they form a combination of a most dangerous character.

The Antivivisection Bill Again in Congress.—Senator Gallinger is reported in the *Congressional Record* of December 15, 1897, as saying: "Upon solicitation from several senators saying that they were receiving letters from constituents protesting against the passage of the bill, I allowed it to drift along. On the 13th day of May the bill was again reported and is on the calendar. At an early day I shall move to take up that bill, which is *Senate Bill 1063, Calendar No. 136.* I trust that when I ask the consideration of the bill it may not be objected to, but that that matter which to my mind is extremely important—and a controverted matter, I will say, on the part of physicians, scientists, and humanitarians—may have a fair discussion, and that we may have a vote of the Senate deciding whether or not that bill shall pass this body."

Requirements of the Various States Regarding the License to Practise Medicine.—To obtain a license to practise medicine it is necessary to pass an examination in the following States: Alabama, Delaware, District of Columbia, Florida, Georgia, Idaho, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Montana, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Oregon, Pennsylvania, South Carolina, Utah, Virginia, Washington, and West Virginia. Examination is required although certain diplomas are recognized as an equivalent in the following States: Arkansas, Colorado, Connecticut, Illinois, Indiana, Iowa, Missouri, Oklahoma, Rhode Island, Tennessee, Vermont, Wisconsin, New Mexico. A diploma only is required in the following States: California, Kentucky, Nebraska, Ohio, South Dakota, Texas (practically). The law practically imposes no restriction in the following: Alaska, Arizona, Kansas, Michigan, Nevada, Wyoming. Dr. D. C. Newman of Seattle, Wash., writes us that the law requiring a license to practise medicine in that State is practically a dead letter, for it is never enforced, and adds that fully one-fourth of the practising physicians of that State have never complied with it.

Hospital and Dispensary Abuse in Boston.—The Boston Medical Society, at its meeting December 18th, 1897, adopted the following resolutions: "*Whereas*, the unrestricted abuses of medical charity in the great hospitals and dispensaries of Boston is being seriously complained of by a large number of general practitioners; and *whereas*, the State has granted charters to these hospitals and dispensaries for the definite purpose of giving medical and surgical care and treatment to indigent persons within the city and commonwealth; and *whereas*, the Boston Medical Society, individually and collectively, recognize, with every feeling of sympathy, the rights and just claims of some of our citizens to the benefits of public and private charity, and will not be found wanting in generosity in whatever may tend to foster the moral, social, and physical well-being of the sick, the poor, the destitute, the lowly, the worthy, and the unfortunate; and *whereas*, large numbers of persons, of both sexes, frequently, daily, and repeatedly receive medical and surgical advice and treatment gratuitously for numerous cases of minor surgery and ordinary illness who are believed to be financially competent to pay moderate fees; and *whereas*, the time, facilities, and attention at the dispensaries being necessarily limited, that which is received by the well-to-do and the undeserving is, in that proportion, withheld from those who, by the chartered rules of these institutions, are justly entitled to their benefits; and *whereas*, the practitioners of medicine and surgery of any community, who have duly graduated from accredited medical colleges, and have incurred the expense of locating in such communities, naturally and justly feel that their present and prospective rights and privileges are wrongly encroached upon by the abuses now in practice in connection with medical charities. Therefore, *resolved*, that it is the opinion of this society that some means can be found to check or modify this formidable evil; and, *resolved*, that an urgent call be made upon all such members of the profession who are in sympathy with the movement, and have at heart the best interests of the medical profession, to render such moral assistance and financial support in the adoption of such measures as will tend to eradicate and prevent these evils, abuses, and practices; and *resolved*, that an open meeting be held in the near future, and the profession at large be invited to be present; and *resolved*, that a copy of these resolutions be sent to the *Boston Medical and Surgical Journal*, *Journal of the American Medical Association*, *Medical Record*, *New York Medical Journal*, and THE MEDICAL NEWS for publication. Signed for the Society, M. GERSTEIN, M.D., Secretary, 1038 Washington street."

SPECIAL ARTICLE.

FINAL REPORT TO THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK OF ITS COMMITTEE ON THE ABUSES OF MEDICAL CHARITY.

(Transmitted December 27, 1897.)

MR. PRESIDENT AND GENTLEMEN: Report has already been made of the work done by your Committee on the Abuses of Medical Charity since its appointment one year ago. In its final report, here presented, the committee offers for your consideration and approval the text of a Dispensary Bill which it is proposed to have introduced in the Legislature during the early days of the approaching session. This bill, which has been prepared by the Joint-Committee on Medical Charity Abuse, has received the endorsement of the several committees appointed, with power, by the New York State Medical Association, New York County Medical Association, New York Medical League, New York Society for Advancing the Practice of Medicine, Kings County Medical Society, Kings County Medical Association, Brooklyn Medical Society, Brooklyn Medical Association, and the Long Island Medical Society.

The text of the bill is as follows:

SECTION 1. By and for the purpose of this act, a dis-

pensary is declared to be any person, corporation, institution, society, association, or agent, whose purpose it is, either independently or in connection with any other purpose, to furnish, at any place or places, to persons non-resident therein, either gratuitously or for a compensation determined without reference to the value of the thing furnished, medical, or surgical advice, or treatment, medicine or apparatus; provided, however, that the moneys used by and for the purposes of said dispensary shall be derived wholly or in part from trust funds, public moneys, or sources other than the individuals constituting said dispensary, and the persons actually engaged in the distribution of the charities of said dispensary.

SEC. 2. Six months after the passage of this act it shall not be lawful for any dispensary to enter upon the execution, or continue the prosecution of its purpose unless duly licensed by the State Board of Charities as hereinafter provided.

SEC. 3. Upon the filing with the State Board of Charities of an application and statements in such form and of such substance as shall be prescribed by said Board, said Board may issue a license in such form as it shall prescribe to any dispensary, if in the judgment of said Board the statements filed and the evidence submitted therewith indicate that the operations of said dispensary will be for the public good.

SEC. 4. The State Board of Charities is hereby empowered to make rules and regulations, and to alter or amend the same, in accordance with which all dispensaries shall furnish, and applicants obtain, medical or surgical relief, advice or treatment, medicine or apparatus, but nothing in this act contained shall be construed to mean that said Board shall have power to determine the particular school of medicine in accordance with which any dispensary shall manage or conduct its work, or to determine the kind of medical or surgical treatment provided by any dispensary.

SEC. 5. When it shall appear to the satisfaction of the State Board of Charities that any dispensary licensed by it under the provisions of this act has violated any of the provisions of this act, or any of the rules and regulations made by the said Board under authority of this act, then, and in that event, the said Board is hereby empowered, due notice and an opportunity for a hearing having been given to said dispensary, to suspend or revoke the license of said dispensary.

SEC. 6. Six months after the passage of this act no dispensary shall make use of any place commonly known as a drug-store, or any place or building defined by law or by an ordinance of a Board of Health as a tenement-house.

SEC. 7. Six months after the passage of this act it shall not be lawful to display or cause to be displayed in any manner whatsoever anything which could directly, or by suggestion, make public the existence of the equivalent, in purpose and effect, of a dispensary.

SEC. 8. Any person who violates any of the provisions of this act, or any of the rules and regulations made and published under the authority of this act, shall be guilty of a misdemeanor, and, on conviction thereof, shall be punished by a fine of not less than ten dollars, and not more than $250.

SEC. 9. Nothing in this act contained shall in any wise be construed to abridge any of the powers of the said State Board of Charities, or of any of the members or officers thereof, or inspectors duly appointed by it, now existing under and by virtue of Chapter 546 of the Laws of 1896, known as the State Charities Law.

SEC. 10. This act shall take effect immediately.

As will be seen, this bill differs essentially from that with which the first report of your committee had to deal, the most important feature being that each and every dispensary must obtain a license from the State Board of Charities, by virtue of which its operations shall be conducted; and that, in case the law, or the rules and regulations framed by the Board be not complied with, said Board is empowered to revoke the license of the dispensary so offending. The vested rights of corporations will in no wise be interfered with, and the effort to correct the crying abuses now so widely prevalent will not result in injury to those institutions which are, and will be, properly and conscientiously conducted. This bill, as now presented, embodies the result of much paintaking and earnest consideration, and it is hoped that it will receive the hearty and unqualified support of those who have the subject of the correction of medical charity abuse nearest at heart. The State Commissioners of Charity have already been informally consulted regarding its provisions, and a copy is about to be sent, together with other literature, which has been prepared, to every legally constituted medical society in the State for indorsement.

It is not the idea of your committee that the universal abuse of dispensary privileges can either be done away with or even adequately controlled all at once, but the enactment of a law, such as provided for in the accompanying bill, will, in its opinion, mark an era in the effort which, during the past twenty years, has been made by so many earnest workers toward this end. Experience has shown that without a law on the statute books, just and equitable alike to the laity and the members of the medical profession, absolutely nothing can be accomplished in the direction of bettering existing conditions, and, therefore, it is with the full confidence that the Medical Society of the County of New York will heartily indorse the action of its committee, and will attach its seal of approval to this amended Joint-Committee Dispensary Bill that this report is submitted.

(Signed) JAMES HAWLEY BURTENSHAW, Chairman.

A. BRAYTON BALL,	ALEXANDER HADDEN,
H. J. BOLDT,	WILLIAM M. POLK,
E. S. BULLOCK,	W. WASHBURN,
HENRY DWIGHT CHAPIN,	W. H. WESTON,
CARTER S. COLE,	FREDERICK H. WIGGINS.

For the Relief of Migraine.—Excellent results are reported by ESHNER from the administration in this affection of the fluid extracts of gelsemium and cannabis Indica. The dose is 3 to 5 drops of each, given three times daily, until physiologic action becomes apparent.

CORRESPONDENCE.

AN ANSWER TO DR. MUNDE.

To the Editor of THE MEDICAL NEWS.

DEAR SIR: I have noticed in the issue of your journal of November 27th a letter from Dr. Paul F. Mundé in which he offers several criticisms of my article on "The Treatment of Abortion," which appeared in THE MEDICAL NEWS of November 6th,

With reference to Dr. Mundé's criticism of the name applied to the large, blunt curette, I beg to say that I have seen the one I use offered for sale in one shop as Mundé's, and in another as Lusk's. So far as I know, it was Dr. T. G. Thomas who introduced the dull, wire curette for scraping the inside of the uterus, and in my opinion an instrument does not become a new one by being made larger and stronger, and used for a kindred purpose. I take, therefore, all intra-uterine dull wire curettes to be essentially Thomas' dull curettes as opposed to Sims' sharp curette, and, if Dr. Mundé is the first who described their use in obstetrics, which I can neither affirm nor deny, his merit in this regard consists in extending the principle of Thomas' curette from gynecologic to obstetric surgery.

As to the other three criticisms, they only prove that Dr. Mundé, on the points in question, does not agree with me, in which he has the same right as anybody else.

H. J. GARRIGUES, M.D.

NEW YORK, December 14, 1897.

CONSTANTINOPLE LETTER.[1]

FROM GEO. R. FOWLER, M.D.,
OF BROOKLYN, N. Y.

MASSING THE TURKISH TROOPS AT THE "SELAMLIK"—THE YILDIZ HOSPITAL—DJEMIL PASHA—TRANSPORTATION EQUIPMENT—THE GERMAN RED CROSS SOCIETY'S WORK—ASEPSIS IN TURKEY—CONSERVATISM OF THE TURKISH SURGEON—THE GRAS RIFLE—THE HAIDA PASHA HOSPITAL—FLORENCE NIGHTINGALE—TURKISH CEMETERIES—EDUCATION OF MILITARY MEDICAL OFFICERS—MILITARY CADETS—THE HOSPITAL CORPS—THE RED CRESENT—THE X-RAYS IN TURKEY.

CONSTANTINOPLE, August 4, 1897.

IN response to a request through our efficient *chargé d'affaires* here, Mr. Riddle, Muchir Theoket Pasha, the commander of the Second Turkish Brigade, in whose district the *Yildiz Hospital*, the largest military hospital in Constantinople, is situated, detailed an adjutant to conduct me to the latter institution. While waiting for the horses to be saddled the Pasha invited me, with true Turkish hospitality, into the beautiful garden adjoining his headquarters, from which point an extensive view of the Bosphorus, with Scutari in the distance, is obtained. There I partook of a refreshing ice and a delightful cup of coffee. By the aid of German, of which the Pasha possessed some knowledge, and the Turkish and English of our dragoman, I endeavored to obtain some information as to the number of Turkish troops, as well as the losses sustained during the recent Greco-Turkish war. With characteristic Turkish caution, however, the Pasha was not disposed to talk very freely upon this subject, but from other sources it was learned that, of the 750,000 men which constitute the war footing of Turkey, less than one-fifth were sent to the front. Certainly there are not less than 10,000 soldiers in Constantinople at the present time, as I had opportunity of estimating upon witnessing the ceremony known as the *Selamlik*, or visit of the Sultan to the mosque, which takes place every Friday afternoon. At this ceremony the troops in Constantinople and vicinity are massed about the palace and mosque, which are only about 500 yards apart, the opportunity being thus afforded for the Sultan to come face to face with his troops upon this, the only occasion upon which the descendant of the Prophet and Ruler of the Nation leaves the palace grounds.

Arriving at the hospital I was greeted most courteously by the Turkish medical officers. These, for the most part, have had the advantage of a training in France or Germany, and I had no difficulty in obtaining information as to the hospital buildings and their capacity.

The *Yildiz Hospital* is beautifully located upon an eminence overlooking the city, and is not far from the Sultan's palace of the same name. It consists of twenty-two pavilions, built of wood, and lined with heavy sheathing-paper. These pavilions or barracks are placed in regular order upon an extensive plateau, with wide streets between, and were erected in less than a month to meet the emergency caused by the war.

We were shortly joined by Djemil Pasha, who, although but twenty-seven years of age, is the surgeon-in-chief of this large hospital. It is currently reported that this young man owes his exalted position to the fact that he is the son-in-law of a prominent and influential individual at the Sublime Porte.[1]

We learned that the hospital has ample accommodations for 1000 patients. At the present time it contains between 800 and 900. We were informed that in the neighborhood of 3000 soldiers have been treated here for injuries alone since the commencement of the war. With the natural desire to lessen the importance of their losses this may be taken as a low estimate, as this is the hospital in which was received the majority of those who survived the somewhat crude means of transportation frequently employed (donkeys and rough carts). The equipment for transportation purposes at the disposition of the Medical Corps consists of eight ambulances and two hundred litters for the entire Turkish army. Many of the wounded were strapped upon the backs of donkeys and mules, and conveyed in this manner miles to the nearest railroad.

A tour of the grounds, including a well-shaded garden for advanced convalescents, was first made, escorted by

[1] This letter was lost in transit, and only recently came to light. It is considered of sufficient importance and interest to warrant its publication even at this date.—ED.

[1] From what I saw of his work in Constantinople, as well as the impression which he produced at Moscow, where he appeared as the representative of the Turkish Army Medical Department at the International Congress, I am convinced that whatever influences were at work to secure his rapid promotion he is largely deserving of the confidence that is reposed in him.

the Surgeon-in-Chief and his staff, after which the pavilions were inspected in detail, and many interesting cases shown.

Two of the pavilions, until a few days ago, were under the care of Dr. Nasse, assistant to Bergmann, and a corps of surgeons and nurses of the German branch of the Red Cross Society. Upon the eve of their departure to return to their own country, they were entertained at dinner in the Yildiz Palace, at the close of which they received at the hands of the Sultan the gold medal and green military decoration, conferred upon those who have distinguished themselves in the performance of some especially valuable service to the Turkish Government. In the hospital mentioned there are two operating-rooms, provided in a special operating pavilion, one at each end of the building. One of these is used for aseptic cases, while the other is for septic cases. To the fact that the majority of the Turkish military surgeons receive an additional training in France or Germany is to be attributed the care exercised in respect to wound treatment. While this was not always ideal, yet such as it was it excited my surprise. There seemed to be an earnest desire, and in some instances an enthusiastic and well-directed effort, to comply with the requirements of modern aseptic work.

While the Turkish surgeons are strikingly conservative, sometimes to a fault, and energetic and ambitious operative attacks are not encouraged, yet this conservatism is not the result of timidity on the part of the operators. Djemil Pasha has twice sutured the axillary artery, after Murphy's suggestion, for injury of that vessel occurring in the course of the removal of secondary carcinomatous glandular masses in the armpit—a procedure requiring surgical courage and skill decidedly above the average. Almost all of the operations performed at the *Yildiz Hospital* were done by the native Turkish surgeons, a fact to which they called attention with pride.

Here, as at Athens, I was shown a large number of gunshot wounds of joints, particularly of the shoulder and elbow. Singular to say, these occurred, in the vast majority of cases, upon the right side. In many of the instances of joint injury secondary resection had been done, some of which were typical. Cases of amputation were conspicuous by their absence. The Turk is violently opposed to noticeable mutilation, and to this is to be attributed his abhorrence of losing a member. Of the twenty-two cases of traumatic destruction of the eye, enucleation had been positively refused in the larger number. Up to the present time none of these have developed sympathetic ophthalmia. In those in which the globe was removed in connection with operations upon the orbit, the authorities had at once supplied an artificial eye, of which the wearer was childishly proud.

The Turkish wounded were rather more severely injured, as a rule, than the Greeks. This is probably due to the fact that the latter were armed with the Gras rifle, which carries a large lead projectile. These were obtained from a supply representing the discarded weapons of the French army, and, in many instances, the pieces were shortened by sawing off the barrel after being purchased by the Greek Government. When employed at short range, however, they are capable of considerable execution. That so many Turks were wounded at short range, and in the head and the upper portion of the trunk, rather serves to contradict the stories of want of coolness, if not actual cowardice, of the Greek soldier, which are current. In justice to the Turk it should also be stated that in no instance was a case observed in which the wound was received from behind. This was likewise true of the Greeks.

A visit was made to the *Haida Pasha Hospital*, in Scutari, upon the Asiatic side of the Bosphorus. This is the hospital made famous as the scene of the labors of Florence Nightingale during the Crimean War. The Turkish authorities in charge seemed to evince some interest when reference was made to the work of this noble and self-sacrificing woman; although her labors were of inestimable value, not even a tablet commemorates her services. This is not to be wondered at, however, when one considers some of the peculiarities of the Turkish character. The average Turk lives only in the present. He puts the past behind him as soon and as far as he may, and devotes but very little thought to the future. Only a short walk from the spot where Florence Nightingale won the love and admiration of the civilized world is to be found the largest Turkish cemetery about Constantinople, where lie the remains of many of the highest dignitaries, as well as warriors and statesmen, that Turkey has ever produced; for the soil of Scutari is considered sacred ground. Here the Ottoman dynasty was founded, and from here Islamism spread itself in Europe. Many illustrious men, therefore, have been buried here. The condition of the place would disgrace the potter's field of the meanest hamlet in Christendom. The tombstones, many of which are painted green to indicate the grave of a descendant of Mahomet, are to be seen leaning in all directions in a shiftless, tumbled-down manner, and many have fallen and are half buried beneath the *débris* of broken-down branches of the Oriental cyprus, the invariable accompaniment of a Turkish burial-place. There is no railing about the place, and the dogs, idlers, and cattle rove about its three-mile area at will. That this was not due to the fact that it is no longer used as a cemetery was attested by the presence of a newly made grave, the freshly painted green tombstone of which, surrounded by a carved turban in many folds, proclaimed the importance during life of its occupant.

I could not help contrasting this with the well-kept English cemetery within sight of the spot where I stood, in which lie buried many of the English officers who died here during the Crimean War.

The *Haida Pasha Hospital* is now only occupied by convalescents, these being principally medical cases. Typhoid fever formerly prevailed here to a considerable extent; but, since the water-supply has been changed and water has been brought in casks from the mountains, it has been greatly lessened.

I was somewhat surprised to find that both Armenians and Greeks are serving at the present time in the Turkish Army Medical Corps. It is a fact that only the faithful followers of the Prophet are allowed to fight under

his banner, and to join its actual combatant rank and file.

The Turkish military medical officer has a special training, and this at the expense of the government. Upon passing his examination and receiving his commission he pledges himself to serve the government twenty-six years, at the end of which time he may be pensioned. If for any reason other than actual physical disability this obligation is not fulfilled, he is forced to refund to the government the amount expended by the latter upon his education.

About one-fourth of the classes at the University of Constantinople are entered as medical students, or about 500 yearly. While at first glance this seems like a large class, yet it should be remembered in this connection that this is the only school in which medicine is taught in Turkey. There is a special department of military medicine, which, together with the regular course, covers six years. In the case of those intending to practice in civil life the examinations are conducted by a civil board, but those designed for the army or navy must pass an examination at the hands of a board of military surgeons.

A surgeon and an assistant surgeon are assigned to each battalion. In addition to these, *medical cadets*, who have attended two or more courses of lectures and demonstrations, are placed under the orders of the medical officers. These are selected from among those who have but a limited preliminary education, and who are not deemed of sufficiently promising material to do credit to the service in the higher grades. The medical cadet may, however, aspire to the latter, and occasionally succeeds in obtaining a commission. Usually, however, he spends his life in performing the most menial duties of the medical service, these including cupping, bleeding, tooth-drawing, and such services as were demanded of the old-time barber-surgeon of the European armies.

The hospital corps consists of non-combatants enlisted for the purpose. Upon occasions of ceremony they parade as a separate organization. This corps corresponds in some respects to the ambulance corps of our National Guard. It is much below the latter in efficiency; for the reason that its members are not trained in rendering first aid to the injured. The brassard is a *red crescent*. The natural aversion of the Turk to anything in the shape of a cross forbids the adoption of the insignia of the Geneva convention. The corps flag is a green field with a red crescent. The corps numbers 3000 for the entire army, including hospital stewards, who must be regular graduates in pharmacy, and pass a special examination before admission. The hospital corps is especially trained in the transportation of the wounded and care of the sick, but its members are not expected to render first aid, save of the simplest character.

The discovery of Röntgen has found its way into Turkey and has been utilized by the medical department of its army. Several cases were shown in which missiles have been located by the aid of the X-rays, and their removal successfully accomplished. The erratic course of the missiles and their inaccessibility rendered their localization impossible by any other means.

OUR PHILADELPHIA LETTER.

[From our Special Correspondent.]

PATHOLOGICAL SOCIETY OF PHILADELPHIA—PHILADELPHIA COUNTY MEDICAL SOCIETY—SOME COMMENTS APROPOS OF THE RECENT OUTBREAK OF DIPHTHERIA AND ENTERIC FEVER.

PHILADELPHIA, December 25, 1897.

AT the last stated meeting of the Pathological Society of Philadelphia, held on December 23d, Dr. Joseph Sailer read a paper on "Results of Laceration of the Brain Substance," based upon the following experiment: A cat having been anesthetized, a trephine opening was made in the skull large enough to expose a rather large area of brain substance, into which a hot platinum needle was then plunged, and moved to and fro in order to lacerate the organ; the wound was then dressed aseptically, and the animal placed under observation. At the end of seventy-two hours the animal died, the brain was removed, and sections were cut from areas near and remote to the site of the lesion and stained by appropriate methods. Microscopic examination of these sections showed that in the vicinity of the clot which resulted from the hot needle, the neuroglia cells had proliferated and were noticeably increased in size, and that extensive degenerated changes in the neighboring ganglion cells had ensued; karyokinetic figures were not observed. Away from the immediate site of the lesion no abnormalities were apparent. Dr. W. E. Hughes reported two interesting cases of Weil's disease occurring in men of middle age. The first case, after a vague history of malarial infection some months before, suddenly developed acute jaundice, hematuria, irregular chills, and hyperpyrexia, followed by rapid collapse and death; *post-mortem* findings showed an enlarged spleen, kidneys, and Pyer's patches, with advanced fatty degeneration of both suprarenal capsules. In the second case, sepsis resulting from an urethral stricture for which perineal urethrotomy was performed, preceded anuria, jaundice, signs of acute hepatic and renal congestion, and obstruction to the venous return flow. In both cases extensive small round-cell infiltration of the capsule of Glisson, and acute parenchymatous degeneration of the liver were found after death. Dr. Joseph McFarland and Dr. J. M. Anders reported a case of pneumothorax in which the site of the perforation had been discovered, this joint-paper including a careful *résumé* of the literature of the lesion, and its discussion from a pathologic standpoint.

At the last stated meeting of the Philadelphia County Medical Society, held on December 22d, Dr. Joseph Price read a paper on "Operative Detail in Appendicitis," in which he advocated a radical operation in cases demanding operative interference at all, and in which many minor details of the procedure were elaborated; he described, among these, a method by which sutures are introduced before final severence of the appendix, thus obviating to a large extent, the speaker claimed, the risk of infection through the wound. Dr. Williams F. Arnold gave a most interesting account of "Some Personal Observations on the Bubonic Plague," which he made in Hong Kong and its environs in 1894. Speaking of the specific cause of this disease, Dr. Arnold said that he had been unable

to convince himself of the specificity of Kitasato's plague bacillus, and that he thought rather that Yersin's bacillus was the true cause of the disease. He seemed to be favorably impressed with the results of Yersin's serum-treatment of the plague, by the use of which he had seen the mortality fall from 80 or 90 to 50 per cent. in severe cases, and from 50 to 10 per cent. in mild cases. Dr. Milton B. Hartzell reported an unusual instance of epithelioma occurring in a boy of fourteen years; the growth was situated at the left ala of the nose, with slight secondary involvement of a small area around the outer canthus of the left eye. It was removed by the local use of pyrogallic acid, healthy cicatrization following this treatment. Dr. Edward Jackson reported a case of ivory exostosis about the size of an almond, growing from the lateral aspect of the nasal side of the orbit, the removal of which he accomplished without difficulty. The speaker also referred to two other cases of a like character, and showed a specimen of the growth. Dr. J. B. Learned read a paper on "The Induction of Sleep by Means of Producing Muscular Fatigue in the Patient," an original feature of which was his advocacy of slow breathing, instead of rapid respiratory movements, as usually recommended for hypnotic effects.

The resources of the Philadelphia health authorities have been greatly taxed during the recent outbreaks of diphtheria and typhoid fever—taxed, it would appear, to an extent which left them completely distanced in the race between health and disease, for the infection spread merrily on, involving whom it chose in what would have been called an epidemic, had the nature of the infection been, for instance, some imported tropical fever, or smallpox. But being only diphtheria and typhoid, to which tuberculosis is, of course, a necessary adjunct to every respectable community—particularly communities with Health Boards—the outbreak had to sink its identity in the official obscurity of "a prevalence in certain sections" of the diseases in question. The epidemic, for such it certainly was, has now subsided, some say because of the intervention of the Board of Health; others, less charitably inclined, say it was because it ran its course. At all events, it has subsided, but at the cost of many lives, and leaving in its wake an unsavory odor of general public mistrust in our methods of municipal hygiene. And is the public, after all, so far wrong in its judgment? What, with foul water, inadequate food-inspection, and a whole host of relics of municipal insanitation of a past era still flourishing here, is the public to infer? Is it not natural for it to place greater confidence in personal immunity and prophylaxis rather than upon the labors in its behalf made by its health and legislative bodies? The time has come for this city to possess a modern water-supply, to abolish with a firm hand nuisances which would not be tolerated for a moment in many centers, to equip its medical-inspection officers with every facility for the intelligent pursuance of their work, and, finally, to legislate so that for such necessities as these she will not be dependent upon the humor of a clique of politicians whose ideas of sanitation and public health are distinctly subservient to the machinations of practical politics, and to the pecuniary plums with which other forms of legislation fill their councilmanic pockets. Councils must be importuned for every improvement needed by the Board of Health, and with the approval of this body only may the present inadequate equipment for coping with epidemics be made effective. The question, therefore, can be solved only by the entire cooperation of both bodies, or by the complete divorce of the one's dependence upon the other. The former seems futile of accomplishment; the latter is palpably impossible. And thus the situation remains, to the detriment of the health of the city at large, and as a tremendous handicap to the efforts of the Board of Health in dealing with these outbreaks of endemic infections, such as the two which have just terminated.

OUR BERLIN LETTER.

[From our Special Correspondent.]

A NEW OPINION ON THE THYROID QUESTION—THE IMPORTANCE OF MIXED INFECTION IN TUBERCULOSIS—AMYLOID DISEASE DUE TO STAPHYLOCOCCIC, BUT NOT OTHER BACTERIAL PRODUCTS—LONG INCUBATION OF GONORRHEA AND ITS SIGNIFICANCE—PROFESSOR MOMMSEN'S EIGHTIETH BIRTHDAY.

BERLIN, December 18, 1897.

PROFESSOR HERMANN MUNK'S article on the "Thyroid Gland" which appeared in the last number of *Virchow's Archives* has naturally attracted a great deal of attention. The Professor of Physiology at the University of Berlin and the successor to the chair of Du Bois Reymond would be deferentially listened to in any case, but besides, Professor Munk's own work in physiology has given him a place among the greatest living workers in this line. It is a little startling to find that he does not agree with the generally accepted theories as to the thyroid gland in animals being essential to life, or that its function is necessary for the proper performance of the processes of nutrition. For years he has been known to hold such opinions, but his reassertion of them now, after a long series of careful experiments in the face of the supposed acquisitions to physiology and therapeutics which prevailing opinions involve, has appeared somewhat in the light of a medical sensation. He states very definitely what are considered to be the cardinal points of the present physiology of the thyroid gland: (1) That animals cannot exist without it. (2) That where death is not immediate a cachexia develops resembling myxedema in the human species, or the so-called cachexia strumipriva after surgical removal of the gland. (3) That the implantation of the thyroid or its internal administration will obviate the symptoms caused by its removal. He then categorically denies each one of these principles and also the doctrine as a whole.

As to animals dying sooner or later as a consequence of the removal of the gland, while in his experiments of ten years ago all animals perished after the operation, now fifty per cent. of the apes and rabbits, and twenty-five per cent. of the dogs and cats are not affected at all by removal of the thyroid. The difference in the results of the operations performed with the antisepsis of 1887 and the asepsis of 1896 and 1897 is a very suggest-

ive series of experiments for the modern surgeon to study. The completeness of the experiments seems to eliminate any chance of error. That the thyroid was thoroughly removed was made positive from the results of autopsies in a number of cases where the animals were killed after months and sections made to decide this point. Nor did any organ develop to replace the supposedly necessary function of the gland. The parathyroids played no such rôle, as they were always carefully sought and removed, except in one instance in which they were left and the animal subsequently died, but the *post-mortem* did not reveal any tendency to compensatory hypertrophy. The hypophysis was very carefully examined in a number of cases to be sure that it did not develop a compensatory function, but no evidence of any change was ever found, and no thymus nodules took on regressive activity to replace the romoved thyroid.

As to the myxedematous cachexia so often described, he has never observed it. He has frequently seen animals die some months after the operation from a progressive wasting, seemingly without cause, but the changes present could never be described as myxedematous. The lesions usually (*post-mortem*) found were those of a chronic gastro-intestinal affection. This was probably due to the well-known tendency of animals to die during captivity from nutritional disturbances because of the unsuitable food and insufficient exercise. By no means all the experimental animals died, but on the contrary, many of them grew fat after the operation. Professor Munk especially criticizes Horsley's two series of experiments on apes. The first is the basis of all the claims which have been made for the development of myxedema in apes. In it, all the apes that did not succumb to the operation became myxedematous within from four to seven weeks. During the last year or two Professor Munk has had thirteen out of seventeen apes live from one to nine months after the complete removal of the thyroid gland, but has observed the development of nothing like myxedema. Some of the comments on Horsely's work and his failure to answer Professor Munk's request to be shown a myxedematous ape or a photograph of one are rather caustic.

As to the question of implanted or ingested thyroids preventing the accidents remote or proximate which follow thyroidectomy, Munk has never observed any such effect. It certainly does not prevent the immediate accidents. The cachexia which so often develops after the operation as the result of captivity, etc., is not influenced by thyroid medication, Professor Munk quotes, in this regard, the work of a number of others who have reached similar conclusions; for instance, one set of observations are detailed in which a fair percentage of thyroidectomized animals survived without thyroid feeding or implantation, while eleven out of twelve, the thyroids of which had been extirpated, and to which thyroid extract had been given as food, died within a few weeks.

Tetany has sometimes been observed after the removal of the thyroid, but it is very irregular in its manifestations, sometimes occurring immediately, sometimes not for some time, and is often interrupted by irregular intervals, during which no spasms occur. All these irregular phenomena point to other conditions for their origin besides the extirpation of the thyroid, which, of course, was a constant factor in the observations. The course of the tetany does not seem to be modified by thyroid medication.

The important question in the study of tuberculosis throughout the German medical world just now, apart from the erection of institutions for its treatment, is the influence of mixed infection on its course and fatality. Some time ago Dr. Michaelis, working in Professor Leyden's clinic, was able to demonstrate staphylococci in the blood of eight out of ten tuberculous patients. Some recent work from Professor Stadelman's clinic more or less confirms the studies of Michaelis, though the percentage of cases in which the staphylococci could be demonstrated was not so high.

A special feature of the work in Professor Stadelman's clinic was the determination by inoculation experiments that the staphylococci found were not especially virulent, but, on the contrary, seemed to have lost their virulency owing to unfavorable circumstances for their growth in the organism. Petruschky, some time ago, observed the same lack of virulency in the streptococci which he had found in the blood of tuberculous patients. The explanation of this would seem to be either Spengler's theory that bacterial growth in the non-succulent cicatricial tissue of tuberculous cavities, in an unfavorable medium, leads to the loss of certain vital properties, or that the comparatively slow growth and the consequent gradual absorption of toxins leads to the formation of certain antitoxic and immunizing agents in the blood which react unfavorably upon the vitality of the streptococcus.

An interesting commentary on the whole subject is the very thorough review of amyloid degeneration which appeared in a recent number of *Virchow's Archives*. Dr. Davidsohn, of Virchow's laboratory, at the suggestion of his chief, has reviewed the literature of this subject, and confirmed by a series of careful personal investigations the results of those observers who claim to have experimentally produced amyloid disease in animals. With the immense material of the Pathological Institute in the Charité to draw from for comparative studies in amyloid disease in man, his conclusions may be accepted as absolutely final.

Dr. Davidsohn has been able to experimentally induce amyloid disease only with injections of staphylococci and their products. Streptococci, though carefully experimented with, did not lead to amyloid degeneration, neither did carefully graduated doses of more virulent bacteria, nor the injection of putrefactive material. The work of others with tubercle bacilli he considers amply sufficient to prove that they alone never produce amyloid degeneration, which somehow seems to be the specific effect of the staphylococcus.

Dr. F. Bruck, in the last number of the *Allgemeine Medicinische Central-Zeitung*, reports a case of gonorrheal infection in which all the circumstances seem to point to an incubation-period of thirty days. The case was carefully studied, and there seems no reason to doubt the facts or the conclusions drawn from them. Such cases

are not so rare as they used to be, and generally are not received with the air of incredulity which was formerly customary. Lesser, here in Berlin, and Finger in Vienna, consider that the possibility of a gonorrheal infection running a very subacute course so that no symptoms are to be noted and yet later lighting up into an acute process cannot be entirely excluded. It is the same principle as that involved in the question of chronic gonorrhea, which may continue years with practically no symptoms. Acute exacerbations, which were once regarded as reinfections, are now considered to be cases of self-infection from an old persistent focus. There are some interesting possibilities in the medico-legal aspects of these cases of gonococcus infection with very long incubation periods, which seem to make the subject worthy of more than passing attention.

TRANSACTIONS OF FOREIGN SOCIETIES

Vienna.

EFFECT OF DIET IN DISEASES OF THE LIVER—EXPANSION OF THE STOMACH WITH AIR—PERONIN AS A SUBSTITUTE FOR MORPHIN—THE IMPORTANCE OF SKIAGRAPHY IN THE DIAGNOSIS OF CALCULI—PHYSIOLOGY OF THE URINARY BLADDER—UNRELIABILITY OF THE HEMOGLOBINOMETER.

AT the session of the Medical Club of November 3d, KOLISCH read a paper upon the *prognosis and treatment of diseases of the liver*, in which he showed as a result of reasoning as well as from experiments upon animals, it is indisputable that in all cases of severe liver disease life may be greatly prolonged by the restriction of the amount of albumin in the food. If too much of this substance is taken at once, NH_3 remains in the blood, and poisons the individual. To facilitate the removal of toxic products, diuretics should be given, calomel being the best of all. Drugs which produce increased metamorphosis of albumens, such as salicylic acid, are distinctly contraindicated. Preparations of bile or its salts are the best cholagogues.

At the session of November 10th, HERZ described a case of *hysteric expansion of the stomach with air*. The patient was a male aged nineteen years, who, after a period of overwork, suffered so greatly from difficulty in breathing and palpitation of the heart, that he was obliged to remain eight weeks in bed. Later the curious symptom developed that with each inspiration the stomach filled with air, emptying again on expiration. The chemic and motor conditions of the organ remained normal and there was no sign of pyloric stenosis.

OSER has observed several such cases, some of which seemed to be due to intestinal disturbances following the abuse of cathartics. In other cases, the swallowing of air apparently resulted from the alternate action of the constricting and dilating nerves of the stomach.

STAMPFL recommended the use of *peronin as a substitute for morphin*, especially in cases of laryngeal and pulmonary disease accompanied by an irritating cough. By the use of this remedy the cough is made less severe and painless, expectoration facilitated, and reflex vomiting ceases. This drug is also valuable in mild neuralgias. Patients do not quickly become accustomed to its use. As peronin frequently produces itching of the skin and increases diaphoresis, it must not be given to phthisical patients with night-sweats, and cannot be used as a laryngeal insufflation. It has no bad effect upon the heart, and does not constipate.

At the session of November 17th, BUXBAUM spoke of the *importance of radiography in the diagnosis of calculi*. Contrary to the opinion which has sometimes been expressed, he found that all varieties of urinary calculi including those composed of uric acid, cystin, or cholesterin, are impermeable to the X-rays. However, he has had so many failures in his attempts to demonstrate biliary and nephritic calculi in the living, that he is still in doubt as to the true value of this method of diagnosis.

At the session of the Imperial Royal Society of Physicians, November 12th, SCHLESINGER narrated two cases which have a bearing upon the *physiology of the urinary bladder*. A woman, aged sixty-one years, suffered some time with symptoms of paralysis of the sphincter and detrusor urinæ muscles and also with complete anesthesia of the perineum, vulva, and mucous membrane of the bladder, followed later by motor and sensory paralysis of the rectum. At autopsy, it was found that a carcinomatous nodule had almost completely destroyed the fourth sacral segment by means of the pressure it exerted. In another patient, a glioma which was found at autopsy to be situated in the third and fourth sacral segment of one side, produced motor disturbances of the bladder without any loss of sensibility. These cases show that the spinal nerves to these organs are bilateral, and, furthermore, that the controlling center for the rectum is not identical with that of the bladder, but it is situated somewhat lower down.

At the session of November 19th, JELLINEK showed by clinical evidence that there is, even in healthy individuals, *no constant relation between the color of the blood and its percentage of iron*. In pathologic conditions this is even more striking than in the normal. Thus, in anemias the color of the blood is changed much more than the percentage of iron is diminished, while in purpura hemorrhagica the reverse is true. This proves the hemoglobinometer to be an unreliable instrument.

SOCIETY PROCEEDINGS.

HARVARD MEDICAL SOCIETY OF NEW YORK.

Stated Meeting, Held November 27, 1897.

THE President, JOHN WINTERS BRANNAN, M.D., in the Chair.

DR. JOHN H. HUDDLESTON read the paper of the evening, entitled

VACCINE.

The paper consisted of a collection of interesting notes upon the following subjects: (1) Vaccination in Europe; (2) a good vaccine laboratory; (3) tetanus following vaccination; (4) generalized vaccinia, and (5) vaccinal immunity. The author described the various methods of preparation of vaccine virus employed in Europe, and

stated that vaccination with calf-lymph is generally practised on the Continent, while it is rarely used in England, where human virus is preferred. Vaccine laboratories in Germany are under Government control. The percentage of successful vaccination in Berlin is 96.84; in Hamburg, 94.85. The best laboratory, in buildings and equipments, is that of Cologne, which the author described at length. A case of tetanus following vaccination was referred to, also forty-five cases of generalized vaccinia in patients varying in age from three days to sixty-two years. Twelve of these were vaccinated with bovine virus, either direct from the animal or preserved; 18 with humanized virus; 1 with cow-pox, and 1 with horse-pox by accidental inoculation. The source of the virus in the other cases was not stated. Nine out of the 45 cases were not vaccinated in the usual way; 8 were inoculated with virus from the vaccine vesicle of another person, and the ninth ate vaccine crusts given accidentally with the food. Seven of the cases terminated fatally as a result of some complication. In regard to vaccinal immunity, the author said that little or no immunity is given the fetus by vaccination of the mother, as shown by Wolf and Gast, who vaccinated respectively sixteen and seventeen women in various stages of pregnancy and subsequently vaccinated the children with complete success. Natural immunity is so rare that those who have seen the largest number of vaccinations are least inclined to admit the possibility of its existence. Immunity is acquired slowly through the medium of vaccination. Repeated experiments have been made by vaccinating a person daily until the vaccinations failed to take, and it has been found that immunity is usually secured within from seven to ten days. The duration of the immunity when obtained is extremely variable; in some cases it apparently lasts a lifetime. Allbutt has reported the case of a woman who was successfully vaccinated three times, and who had smallpox three times. At North Brother's Island, New York, where patients are vaccinated on arrival, it has happened that persons repeatedly sent there have, on each occasion, been successfully vaccinated, revaccination having followed within six months of the first inoculation. Buchanan has reported a series of cases occurring in prisoners in which successful revaccination followed the first inoculation within a very short time—in 4 cases within less than a month; in 9 within two months or less; in 3 within three months or less, and in 12 within six months or less.

DISCUSSION.

DR. FRANK H. DANIELS: I have at present a child under observation whom I have unsuccessfully vaccinated three times. The mother tells me that she has never been vaccinated with success, although several attempts have been made. I used fresh vaccine, and I am going to try again, but it has occurred to me that this may be a case in which there is an inherited immunity.

THE PRESIDENT: I remember seeing a case some years ago at North Brother's Island in which a man was vaccinated and the pustule formed; in spite of this smallpox was contracted, and the two processes went on at the same time. The patient had a most malignant form of the disease, and died of it while the vaccinia was still going on. It would be interesting to know whether many such cases have been reported.

At a recent meeting of this society I spoke of a fluid vaccine which I employed in vaccinating six adults; it was successful in every case, but in all there was a good deal of trouble while the process continued, several patients developing abscesses in spite of the fact that I took antiseptic precautions before using the vaccine. I am not now so enthusiastic about fluid vaccine as I was at that time, and would like to ask if the unpleasant effects in these cases were due to the preparation employed.

DR. HUDDLESTON: The President's question immediately brings to mind what is known concerning "germ-free" lymph. It is at present impossible to collect vaccine virus without germs. But two different, and partially successful, methods of sterilizing virus have been discovered; one consists of the centrifugalization of virus which has been diluted with water, and the second, of mixing the virus with varying proportions of glycerin. The former method reduces the number of bacteria present, but does not entirely remove them; the latter is much more effective, and by means of it the number of germs in lymph, as tested by making cultures on agar, can always be materially reduced within a period which varies from a few days to a few weeks. Sometimes this does not secure sterility, but when old glycerinated virus is not sterile the inference simply is that the germs present are such as resist the action of glycerin; the bacillus subtilis, for instance, which is non-pathogenic, is unaffected by glycerin. It may then be fairly stated that lymph practically, although not absolutely "germ-free," can be secured with considerable certainty. The results from the use of this so-called "germ-free" lymph, whether absolutely sterile or nearly sterile, have not, however, secured freedom from the inflammatory complications of vaccine. On the contrary, it is the general testimony given by those who have experimented at length with such lymph that inflammatory reactions occur in about the same proportion of cases as before this lymph was introduced, and also that not merely inflammatory complications are present, but occasionally vaccinal eruptions as well. At Hamburg vaccination of 1700 primaries with "germ-free" lymph gave eight cases of skin eruptions. The Imperial Berlin Commission recently reported that in its judgment inflammatory appearances are due, first to the condition of the person vaccinated, second to the greater or less amount of effective lymph in the material applied, and, third, to the technic employed in the inoculation. The commission stated that inflammatory complications are especially frequent if the incisions made in the inoculations are numerous, long, deep, and close together. It is a familar fact that inflammation is more frequent in secondary than in primary vaccination. It is also unfortunately the case that a number of German reports state that quite thorough disinfection of the arm by means of sublimate solution and ether before vaccination does not prevent all inflammatory complications, but in some cases has actually seemed to increase them. Nevertheless, it has

been a great advantage to vaccine production that practically germ-free lymph may be obtained; because the germs present, while, as a rule, non-poisonous, are, it is thought, injurious to the vaccine organism, and it is a fact, that by employing "germ-free" lymph, the so-called "purulence" in the producing animals, one of the former bugbears of the vaccine laboratory, has practically disappeared.

Finally, it should be added that while every brand of vaccine has its own bacterial flora, the few germs which are common to almost all are very clearly non-pathogenic to men or animals. Repeated inoculations of germ-bearing lymph have been made in guinea-pigs, rabbits, and other test animals, and almost invariably without any pathogenic results.

DR. REYNOLD W. WILCOX then read a brief paper, entitled

BOERHAAVE ON THE CANINE MADNESS.

Before reading his paper, Dr. Wilcox said he wished to correct some inaccuracies which appeared in the report of the last meeting as published in a recent number of THE MEDICAL NEWS. In speaking of Pasteur Institutes, he did not refer especially to any one. Nor did he mean to convey the idea that all patients died who received antirabitic treatment at such institutions. What he said was, that those patients who did die after receiving the treatment, died at about the same length of time after the inoculations. Again, in speaking of the symptoms described by Dr. Cabot as occurring in animals inoculated with rabies as similar to those which took place in guinea-pigs which he had inoculated with cod-liver oil for experimental purposes, he referred to the so-called alkaloids of cod-liver oil.

The author first spoke of the variations in the period of incubation of hydrophobia in the human being, as given in the old books, in which it is variously stated as being from twenty-four hours to as long a period as forty years, and repeated his statement made at the last meeting that there is no known infectious disease with such an indefinite incubation period as the one under consideration. He then read extracts from Van Swieten's Commentaries on Boerhaave "On the Canine Madness," published in 1776. He further said that, in carefully looking over the literature of the subject, he had been surprised to find that since 1776 all authors, in writing of hydrophobia, have copied Van Swieten's description of the disease, and that even the most modern writers have copied from each other the self-same description. In a work published as late as 1875 the maximum length of the incubation period is given as three years. To show that inoculation against rabies, with attenuated virus as an immunizing agent, is not an entirely new idea, he read a passage from Van Swieten's book, in which it is recommended that "the burnt liver of a mad dog" be eaten by the person bitten in order to ward off hydrophobia.

DISCUSSION.

DR. WILCOX: I have studied the *post-mortem* findings in persons alleged to have died of hydrophobia, and have learned that it is distinctly stated in the later books that the blood-vessels of the pons and cortex are enlarged and congested, that the perivascular spaces are infiltrated with round cells, and that small hemorrages are also found; whereas, in the old books special mention is made of "dry brain" being present in such cases. I have been trying to recall some of the patients I have seen who were supposed to have suffered from hydrophobia, and I think I have seen twelve, of whom three died. Of those who survived there can be no reasonable doubt but that four were hysterics; one had tic convulsif, and another tetanus; the remainder suffered from fear of hydrophobia. In the three who died the usual *post-mortem* signs of septicemia were found. I repeat that I do not believe there is a definite disease hydrophobia, although I am willing to be convinced of its existence. I do not want to convey the impression that I do not appreciate the work which is being done by Dr. Cabot and others; but as long as no lesion can be demonstrated after death, and not one of the dicta for the determination of an infectious disease, as Koch has set forth, is found, I cannot believe in the existence of hydrophobia.

DR. FOLLEN CABOT: In regard to Wilcox's last remarks I want to say that such criticism is rather stimulating than depressing, for it makes me all the more determined to prove what I believe to be the truth. I am convinced of the existence of a disease which produces certain definite symptoms by inoculations from one animal to another. For instance, the virus which is used in the laboratory of the Board of Health has probably been inoculated into 2000 rabbits here and in Baltimore, and was used many years in Paris. The virus is now a "fixed virus," that is, it produces the same symptoms with death following on about the same day in each consecutive inoculated animal. The rabbit is subdurally inoculated with an emulsion made from the medulla of a rabbit dead from rabies. The animal is apparently perfectly well during six days following the inoculation, then a beginning tremor is noticed, most marked in the hind legs, and combined with weakness; on the seventh day the animal is markedly paralyzed; may be excited, and froth at the mouth; on the eighth day complete paralysis supervenes, and the animal dies any time from the tenth to twelfth day. These animals do not attempt to bite, but open and close the jaws, and have an increased flow of saliva from the mouth. Toward the last the bladder is paralyzed. Guinea-pigs have the furious form of the disease after an incubation period of from five to six days; they then become excited; run around furiously, biting at everything, showing some paralysis of the throat, and an abundant flow of saliva. Paralysis soon begins in the hind legs, and death occurs on about the seventh day.

I have here to-night a guinea-pig and a rabbit which have been inoculated with virus from an animal dead with rabies. The rabbit was inoculated eight days ago and is nearly wholly paralyzed which has been made more marked by transportation and exposure. The guinea-pig is just at the beginning of the stage of excitement of rabies. The animals are not what I intended to show as typical, but I wish any gentleman here, particularly Dr. Wilcox, would come to the laboratory and see many of the ani-

mals in the condition I have described. All cultures made from the emulsion, prepared by mixing a small piece of medulla from a rabid animal and a little water, are sterile to all tests in different media, if not so the animal inoculated will die in different media, if not so the animal inoculated will die of septicemia, always traceable to some impurity which has entered the material during the autopsy or in the process of emulsifying.

DR. SCHRAM reported a case of

CONJUGAL DIABETES.

The patient, a woman, first came under observation seven years ago, at which time she was sixty-nine years of age, and had been married forty-eight years. Sugar was constantly found in the urine in amounts varying from less than one to four per cent. She refused to submit to rigorous diet and died in July, 1897, in diabetic coma. Thirst and pruritus had been the most troublesome symptoms. An extensive ischiorectal abscess developed two weeks before death. One week later the husband's urine was found to contain three per cent. of sugar. Symptoms of the disease sufficient to attract his attention antedated his wife's death by about two weeks. Sugar is now found in his urine in abundance, but disappears for a time under diet and opium. He is now seventy-six years of age and apparently contracted the disease seven years after it was first discovered in the wife and after nearly fifty-three years of married life. The couple had eleven children, seven of whom are alive and well.

In a series of 5000 cases Boisumeau found 1.8 per cent. of conjugal diabetes. Most investigators agree that the development of the disease in both husband and wife is not accidental, but that an etiologic relation exists. The facts thus far published do not shed much light on the two theories of causation now held, *viz.*: (1) that the ordinarily accepted causes of diabetes are active in both husband and wife, and (2) that the disease is contagious. Cases have been reported with almost conclusive evidence of contagion, but the nature of the contagium and how it is conveyed are mysteries.

DISCUSSION.

DR. DANIELS: I should doubt whether it is a question of contagion or infection in such a case as the one reported. The disease could have existed undiscovered a long time. These people had lived together fifty years, and were exposed to identical conditions; therefore, whatever conditions favorable to the prodution of the disease were present in the case of the wife might also have been present in that of the husband. I would rather attribute it to this fact than to contagion or infection, especially as it did not appear in the man until seven years after its onset in the woman.

DR. SCHRAM: In regard to the doubt which has been expressed as to contagion in diabetes, I would like to mention some recently reported cases in which laundresses apparently contracted the disease by washing the clothing of diabetics. However, the question is still an open one. The authorities differ very much, but the French school is inclined to believe that diabetes is contagious.

DR. DANIELS: Some time ago I reported the case of a man, forty years of age, in whose urine sugar was found. He soon contracted syphilis during the early stage of which the sugar disappeared to reappear later on.

Dr. J. P. MCGOWAN: I have a patient, a man thirty-nine years old, who has been under observation four years, and who during years has had more or less sugar in his urine, the amount depending upon his habits, which are not always what they should be. About two years ago he contracted syphilis, and a strict diet and the usual treatment were administered. Sugar entirely disappeared from his urine two months after the occurrence of the secondary symptoms. He was under observation the ten months subsequent to the manifestations of syphilis, during which time frequent examination of the urine failed to reveal any sugar; this fact, I think, was due more to the regulation of his habits than to any special effect of the syphilitic poison.

DR. ROBERT H. GREENE: It is a well-known fact, I think, that sugar often disappears from the urine in diabetics who have been attacked by syphilis, although, so far as I know, no explanation has been given as to why this is so. There are some writers who claim that diabetes proper is always the result of syphilis.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, Held November 2, 1897.

THE President, DR. C. A. HERTER, in the Chair.

DR. GEORGE W. JACOBY exhibited a patient with a typical case of Thompson's disease. He is a young man who had been referred to him by Dr. Schwinn of West Virginia, with a correct diagnosis. The patient is twenty-eight years of age, and has lived in this country since 1884. There is nothing in the family history especially bearing upon the condition, except that a distant cousin is said to have walked stiffly and in a peculiar manner for fifteen years. The patient himself has always been delicate, but has been as active as other boys. He had typhoid fever in 1889, and on recovering from this first noticed a cramp in the legs. After a little it was found that he could not execute movements as quickly as before. In 1893, he first sought treatment. During the past year or two his arms and hands have also been affected. The condition varies considerably at different times, but is apparently not influenced by meteorologic conditions. The examination showed quick reaction of the eye muscles, with spasm of the external rectus; cramp of the masseter muscles on bringing the jaws together forcibly; no involvement of the pterygoids. All the muscles of the upper extremity and of the thorax are involved—indeed, nearly all the muscles of the body. The contraction of the muscles is decidedly tetanic, and at first was very marked, but, on repeated tests, it gradually subsided. The electric examination showed marked myotonic reaction, and also a wave-like appearance, but Dr. Jacoby could not make up his mind that this latter phenomenon consisted of a series of waves, such as are observed in water. A piece of muscle had been excised from the biceps, and also from the quadriceps, but they had not yet

been minutely examined. The case is quite characteristic on account of the marked variations occurring from time to time. The speaker said that in an article published by him ten or more years ago he had taken the stand that these cases are probably of myopathic origin, due to some congenital defect in development, but in the light of modern investigation he is now disposed to believe that some central cause is operative—that there is a functional hereditary derangement of the central nervous system—a condition of lessened resistance in the cells. This does not seem to him a strange assumption, when one considers the well-known idiosyncrasies exhibited to various toxic influences. On the theory that some kind of toxemia is the foundation of this disease, he thought the observed phenomena could be explained—at least in this direction seemed to lie the possibility of solving the pathogenesis of this variety of disease. This patient had not been affected by the trouble until he was eighteen years of age; hence, there is no propriety in calling such a case "myotonia congenita." He divides these cases into three classes as follows: (1) myotonia congenita; (2) myotonia acquisita; and (3) myotonia transitoria.

DR. FREDERICK PETERSON asked, why a theory of causation might not be founded upon chemic changes in the muscles? Changes in the structure of the muscles, he said, are known to arise—for instance, in connection with typhoid fever.

DR. HERTER thought that we must look to toxic agents as furnishing at least a clue to the causation of such conditions. The peculiar susceptibility to certain types of poisons, seen, for instance, in epilepsy, must be referred to peculiarities of the central nervous system. He would agree with Dr. Peterson that these cases do not seem to be of central origin, and that it is more probable that they arise from chemic changes in the muscles. To study this subject successfully, it would be necessary to inquire into the condition of the secretions and excretions at the time of the onset of the disease, and not after it had become chronic.

PACHYMENINGITIS HEMORRHAGIA INTERNA IN CHILDREN

was the title of a paper by DR. C. A. HERTER, in which he said that internal hemorrhagic pachymeningitis is usually considered to be a very rare condition in children, yet one German observer has found it in about seventeen per cent. of his autopsies. The following cases were reported:

CASE I.—A female child, five and one-half months of age, was admitted to the Babies' Hospital, May 15, 1897, with an entirely negative family history. The illness had begun one month previously with persistent vomiting. The head was of normal shape, and the fontanels were not bulging. There was a soft spot over one parietal bone. The child had no teeth. On the fifth day after admission tremor and nystagmus developed. Four days later there was a general convulsion, in which the mouth deviated to the left. Cyanosis was a feature of the convulsion. A second attack occurred within ten hours. After these seizures the fontanels were sunken. The child now became semi-comatose, and died after a few days. The autopsy showed the presence of hemorrhagic pachymeningitis, fibrinopurulent pleurisy, pulmonary congestion, fatty liver, and nephritis. Along the superior longitudinal fissure, over the entire base and over the island of Reil on both sides was a membrane covering the pia. The ventricles were normal in size, and contained about one dram of hemorrhagic fluid. There was fluid blood in all the sinuses. The cervical cord showed the same conditions. Under the microscope the right occipital region showed the pia attached to the cortex in many places, and there was a splitting up of the membrane overlying the cortex into two or more layers. The inner layer was infiltrated with small round-cells. The outer membranous layers consisted of the same cells, fibroblasts, and connective-tissue fibers. The island of Reil showed the same condition, but much more marked, as was also the case over the cerebellum. In the spinal cord there were only slight traces of hemorrhage.

CASE II.—Female infant, colored, twenty-two months old. The child had been nursed seven months. It had never walked or stood alone, and was very rachitic. The first two months in the hospital were marked by slight loss in weight and considerable prostration. In October, 1897, the child was readmitted, with the statement that she had been well up to three days before, at which time she had had four convulsions followed by three more the next day. The general condition was very bad. The hands and feet were in a position of persistent flexor contraction, characteristic of tetany. The knee-jerks were unobtainable; the fontanels were bulging. There was slight, but varying rigidity of the muscles at the back of the neck. Bloody mucus diarrhea was present, and the child died comatose. The autopsy showed pachymeningitis hemorrhagica interna, bronchopneumonia, and acute and chronic ulcerative colitis. Over the right side of the brain was a recent blood-clot covering the entire hemisphere, and also the left occipital lobe. The inner surface of the dura was covered with a membrane extending from the superior longitudinal fissure on either side. The pia was congested. The ventricles and brain substance were apparently normal. All the sinuses were filled with recent clots. The microscopic examination showed thickening of the pia over the right temporosphenoidal lobe, and the vessels of the pia were thickened. There was also a thick membrane splitting up into layers, as in the other case. There were numerous small blood-vessels, and hemorrhages had occurred into the meshes of the membrane. In places, there were aggregations of small round-cells undergoing fragmentation. They were chiefly found in the superficial layers of the membrane. In the dura the fibers were separated from each other by serous infiltration, and the dura was covered with a membrane similar to that already described. In places, there was very extensive pachymeningitis.

It is at about the age of five months, the speaker said, that this disease is especially frequent. The majority of these infants are badly nourished, many of them being subjects of rachitis or of chronic colitis. The new membrane must be regarded as originating from proliferation of the dural endothelial cells. In some cases there is lit-

tle inclination to hemorrhage. The membrane is very variable in thickness; sometimes it reaches a thickness of two or three lines. There seems no good reason for thinking that the locality of the pigmentation indicates that the layer of blood originates from the inner surface of the dura. On the other hand, there is no conclusive proof of the old notion that the disease is of inflammatory origin. It is so common to find severe intoxications without such lesions that the intoxication theory does not seem tenable. It is apparently impossible to recognize the condition until the hemorrhage has occurred, and even then it is extremely difficult to make a positive diagnosis. Slight cerebral symptoms are probably masked in these very young and usually marantic children. The hemorrhage is probably more often unilateral, and the usual symptoms present are rigidity, hemorrhage, and coma. Paralysis is rarely noted. The pyrexia is usually less than in meningitis, but these cases are so commonly complicated with other diseases that the range of temperature is variable. The speaker did not think there is any symptom or combination of symptoms in hemorrhagic internal pachymeningitis which might not be encountered in any acute infection without any cerebral affection being present; but whenever unilateral rigidity and convulsions with deepening stupor are present in a cachectic or rachitic child under one year of age, we should think of such a diagnosis. It is probable that relatively slight traumatisms to the head may occasion rupture of the vessels in the highly vascular membrane. This gives these cases a certain medico-legal importance.

DR. PETERSON remarked that the condition is interesting to him because of the possibility of its being occasionally found in infantile cerebral palsy.

DR. HERTER said that he was inclined to think that these membranes are considerably more frequent than one would suppose from the literature. It is quite possible to overlook the presence of the membrane if it is not decidedly vascular.

A paper, entitled

THE PATHOLOGY AND MORBID ANATOMY OF HUNTINGTON'S CHOREA, WITH REMARKS ON THE DEVELOPMENT AND TREATMENT OF THE DISEASE,

was read by DR. JOSEPH COLLINS, who said that the neurologist frequently encounters knotty problems, and among these none had the secret of its genesis more carefully concealed than the hereditary degenerative diseases. The pathogenesis of the acute inflammatory diseases of the nervous system is an open book, but the degenerative diseases are discouragingly slow in yielding the mystery of their being. This is especially true of such degenerative affections as the hereditary ataxias, choreas, and dystrophies. The status of the original lesion cannot always be inferred from a consideration of the lesion found at the time of death, and this is particularly true if the disease has existed a great number of years. No one could do much laboratory work on the central nervous system of individuals who had succumbed to degenerative nervous diseases of long duration without having forced upon him the fact that there are certain abnormalities of the circulatory system—varying degrees of degeneration of vessels, changes in the size of the lymph spaces, and relative disproportion of connective tissue to the parenchyma —which occur in all degenerative diseases, considered entirely apart from their causation. He is convinced that such changes are very often secondary, and have no other significance than as evidences of protracted disturbance of nutrition, and that this nutritional depravity is the result of the existence of the original lesion. There is nothing more certain than the occurrence of glia proliferation in all slowly progressing, destructive lesions of the nervous system, but nothing can be more misleading than to consider this glia overgrowth to be primary, and the changes in the parenchyma secondary.

Huntington's chorea, Dr. Collins said, is a comparatively rare disease, and of rather recent recognition; hence, the reports made upon its pathology have not been uniform. The discrepancies are apparently the result of the varying points of view of different observers. In studying the nervous system in cases of Huntington's chorea it is scarcely justifiable to maintain that all the morbid conditions are inherent to the disease; for, as had been said, many of them might be the consequence of prolonged interference with nutrition. Although the present study of the pathology of the disease is upon an individual who has had the disease a considerable time, it is compared with a case of much shorter duration reported by Dr. C. L. Dana. A study of these two cases, he felt confident, would go far toward establishing the morbid anatomy and hinting at the pathogenesis. His patient was a man, fifty-five years of age, who had married in early manhood, and who was the father of three children—all of them giving evidence of neuropathic inheritance. The known duration of the disease in his case was ten years. In the beginning the hands only were affected, but in the last years the lower extremities were also involved. The mind remained in fairly good condition up to about three years before his death, when he began to have suspicions about his relatives and friends, and became forgetful and suicidal. His speech was so imperfect that during the last years of life he was understood with difficulty. Dr. Collins had seen him for the first time a few days before his death. He then had a temperature of 105° F., and it remained at about this point until the end. The movements were very severe and incessant, except during sound sleep, although even then they frequently wakened him. He was was quite conscious, but made no response to questions. The cause of death seemed to be exhaustion and high temperature. The disease was traceable to the maternal grandfather, an Irishman, who had three children, two of whom were similarly affected. One of these was the mother of this patient, and of her seven children, five were so afflicted. The other daughter had two children, one of whom became choreic. In three generations there had been no less than nine affected individuals, and when it was considered that many of these children died in infancy, the number of cases that had developed was surprisingly great.

At the autopsy, on opening the skull, the dura was quite adherent, the diploe dense, and the Pacchionian depressions marked. The brain had a wet appearance, as

did also the cord. The pia was not adherent to the brain. The convolutions of the anterior pole of the brain were very small, and the entire encephalon weighed forty-two and one-half ounces. The dura was intimately adherent to the spinal column. The principal fissures were somewhat wider, more shallow, and shorter than in the normal brain, but there was nothing pointing to defective convolutions. The average thickness of the gray matter was uniformly less than the normal, but this thinness could not be attributed to age. An examination of the pons and medulla oblongata did not show any marked variation from the normal, but the changes were more noticeable lower down. Microscopic changes were not confined exclusively to the Rolandic region, but the process here was more advanced. The specimens were stained by various methods, and carefully examined. The macroscopic changes were briefly as follows: (1) thinness and atrophy of the cortex; (2) the mottled, streaked appearance and cribriform state on cross-section of the brain, due to diminution in number and in health of the ganglion cells, and to the increased perivascular and pericellular spaces and increased patency of the blood-vessels. The microscopic changes were: (1) a decay or slowly progressive degeneration of the ganglion cells of the cortex throughout the brain, especially of the two deepest layers, the layers of large pyramids and polymorphous cells. This cell death was particularly evident in the Rolandic region, very much less so in the anterior pole of the brain, and incomparably less in the posterior pole; (2) increase of glia tissue, but not sufficiently prominent to constitute sclerosis, the conspicuous increase being about the blood-vessels and ganglion cells; (3) enlargement and distention of the pericellular spaces; (4) slightly diseased blood-vessels, consisting principally of a proliferation of the nuclei of the adventitia and a thickening of the intima. This involvement of the vessels was not regular or symmetric, but showed itself only in certain sections of vessels; (5) relative paucity of the medullated fibers of the cortex. In short, it might be said, that the lesion was a chronic parenchymatous degeneration of the cortex, with consecutive and secondary changes in the interstices, the brunt of the disease having been borne by the motor regions. There was, in consequence, a degeneration of the pyramidal tracts in the spinal cord. In Dr. Dana's case the central convolutions suffered most, and the process occurred in patches throughout the affected cortex. There was nothing to justify the opinion, that it was an inflammation—the process was evidently one of degeneration.

In connection with the treatment, Dr. Collins said, that he desired to emphasize the necessity for delaying the advent of the disease in those who had a hereditary tendency to it, and also to emphasize the folly of tenotomy of the eye muscles—a method of treatment now being carried out upon one of these unfortunate individuals in this city, with a promise of a cure. If we wished to influence the course of hereditary chorea after it had once become manifest, it would be necessary to administer whatever drug was selected in the largest possible doses consistent with life, and to maintain this medication for a long time.

DR. ONUF said that he had been present at the autopsy on the case reported in the paper, and had been especially impressed with the general narrowing of the gyri—a general atrophy. On section, the mottled condition of the cortex had been most striking, but the cribriform appearance produced by the enlargement of the perivascular spaces was also worthy of note. The general appearance of the brain resembled very closely that of general paresis. The microscope confirmed the macroscopic findings, although the changes were not as marked as one would have expected from the gross appearance. The cell changes were of the atrophic order. The characteristic feature was the accumulation of neuroglia cells in the pericellular and perivascular spaces. His impression was, that this accumulation is due to a secondary process following atrophy of the cells. The disease is evidently a degenerative one, originating in the parenchyma of the brain, and not in the interstitial tissue.

THERAPEUTIC HINTS.

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